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THE LIGHT CENTER OF THE INDUSTRY SINCE 1955

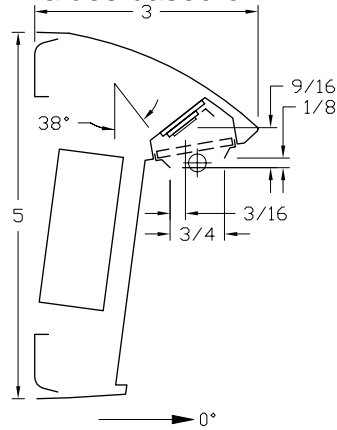
NVLAP
NVLAP LAB CODE: 200925-0

INDEPENDENT TESTING LABORATORIES, INC.
3386 LONGHORN ROAD, BOULDER, CO 80302 USA

PHONE: (303)442-1255 • FAX: (303)449-5274 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINATION

Values based on 3.5 foot mounting height.



REPORT NUMBER: ITL67886

ISSUE DATE: 03/21/11 PAGE: 1 OF 7

PREPARED FOR: RAB LIGHTING, INC.

CATALOG NUMBER: SLED5N-BLED5N

LUMINAIRE: CAST BROWN PAINTED METAL HOUSING WITH HORIZONTALLY GROOVED SURFACE BELOW APERTURE, ONE CIRCUIT BOARD WITH ONE LED, FORMED SEMI-SPECULAR METAL REFLECTOR, CLEAR GLASS LENS, FORMED BROWN PAINTED METAL LENS FRAME.

LAMP: ONE WHITE MULTI-CHIP LIGHT EMITTING DIODE (LED) WITH LEDS ARRANGED IN AN ARRAY OF THREE LINEAR ROWS, TILTED 38-DEGREES FROM VERTICAL BASE-UP POSITION.

TOTAL INPUT WATTS = 5.19 AT 120.0 VOLTS

LED DRIVER: LINKCOM BPHE005C401-50

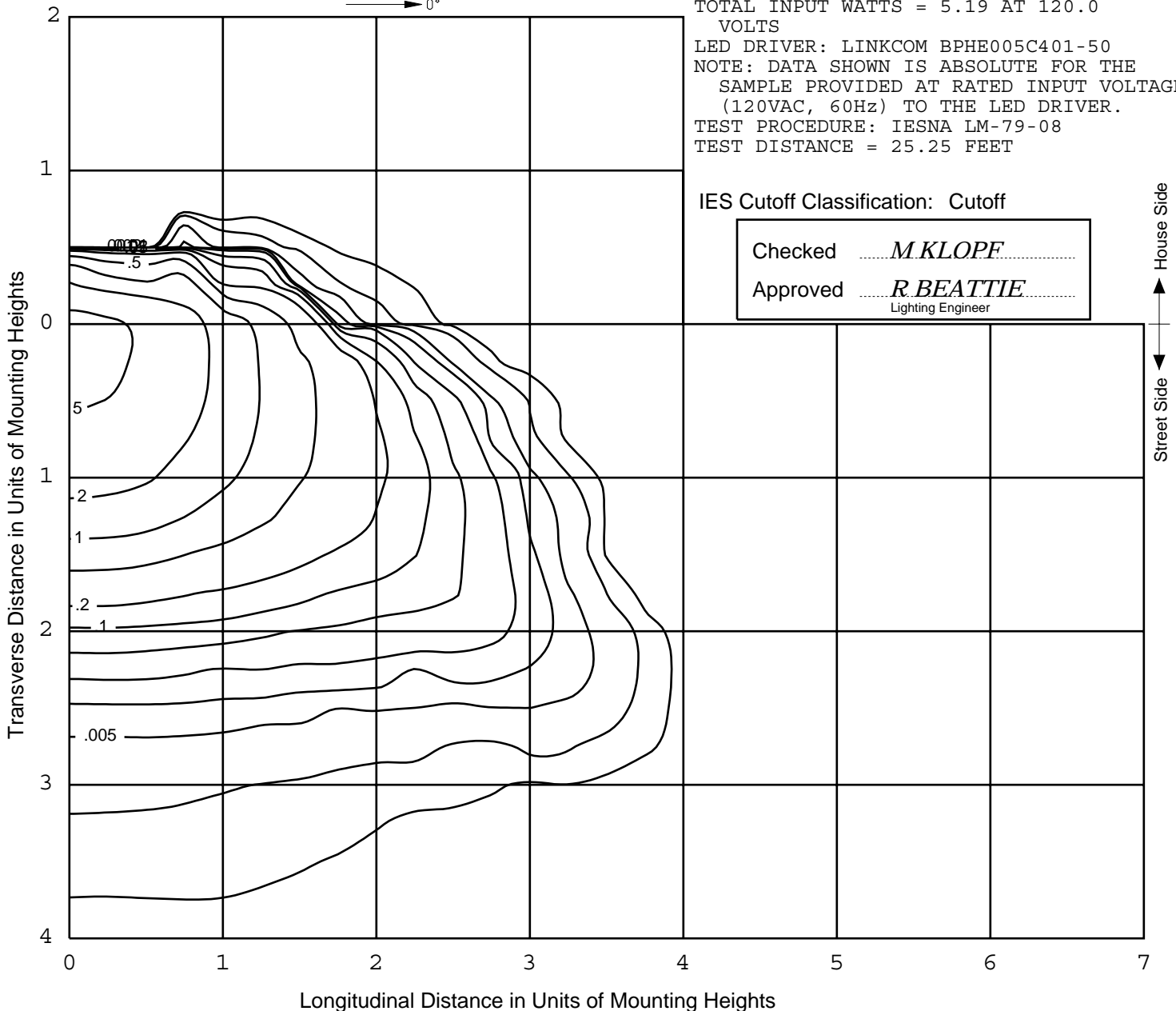
NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (120VAC, 60Hz) TO THE LED DRIVER.

TEST PROCEDURE: IESNA LM-79-08

TEST DISTANCE = 25.25 FEET

IES Cutoff Classification: Cutoff

Checked *M.KLOPF*
Approved *R.BEATTIE*
Lighting Engineer



REPORT NUMBER: ITL67886

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PREPARED FOR: RAB LIGHTING, INC.

CATALOG NUMBER: SLED5N-BLED5N

LUMINAIRE: CAST BROWN PAINTED METAL
HOUSING WITH HORIZONTALLY GROOVED
SURFACE BELOW APERTURE, ONE CIRCUIT
BOARD WITH ONE LED, FORMED SEMI-
SPECULAR METAL REFLECTOR, CLEAR GLASS
LENS, FORMED BROWN PAINTED METAL LENS
FRAME.

LAMP: ONE WHITE MULTI-CHIP LIGHT
EMITTING DIODE (LED) WITH LEDS
ARRANGED IN AN ARRAY OF THREE LINEAR
ROWS, TILTED 38-DEGREES FROM VERTICAL
BASE-UP POSITION.

TOTAL INPUT WATTS = 5.19 AT 120.0
VOLTS

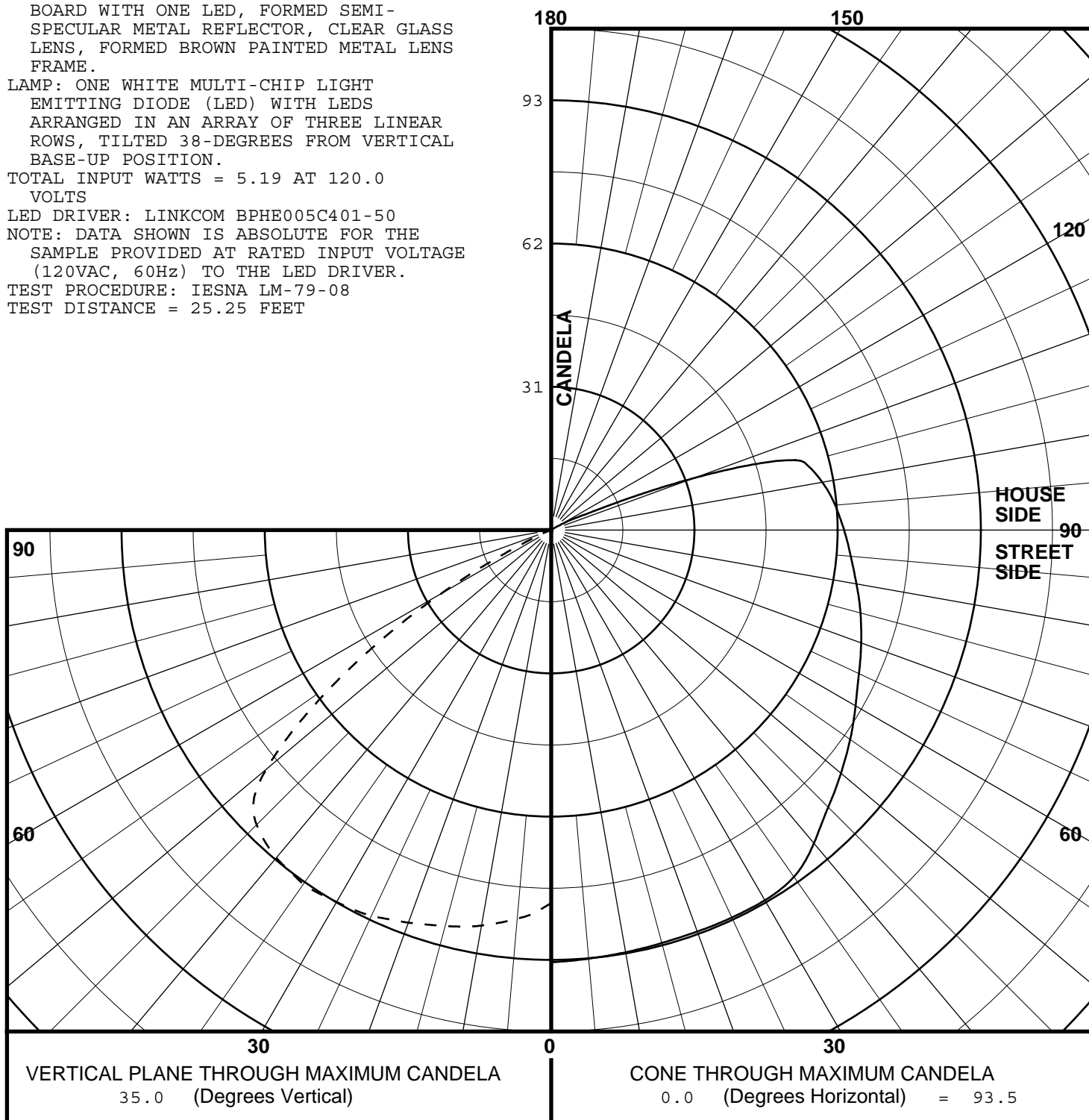
LED DRIVER: LINKCOM BPHE005C401-50

NOTE: DATA SHOWN IS ABSOLUTE FOR THE
SAMPLE PROVIDED AT RATED INPUT VOLTAGE
(120VAC, 60Hz) TO THE LED DRIVER.

TEST PROCEDURE: IESNA LM-79-08

TEST DISTANCE = 25.25 FEET

MAXIMUM PLANE AND MAXIMUM CONE PLOTS OF CANDELA

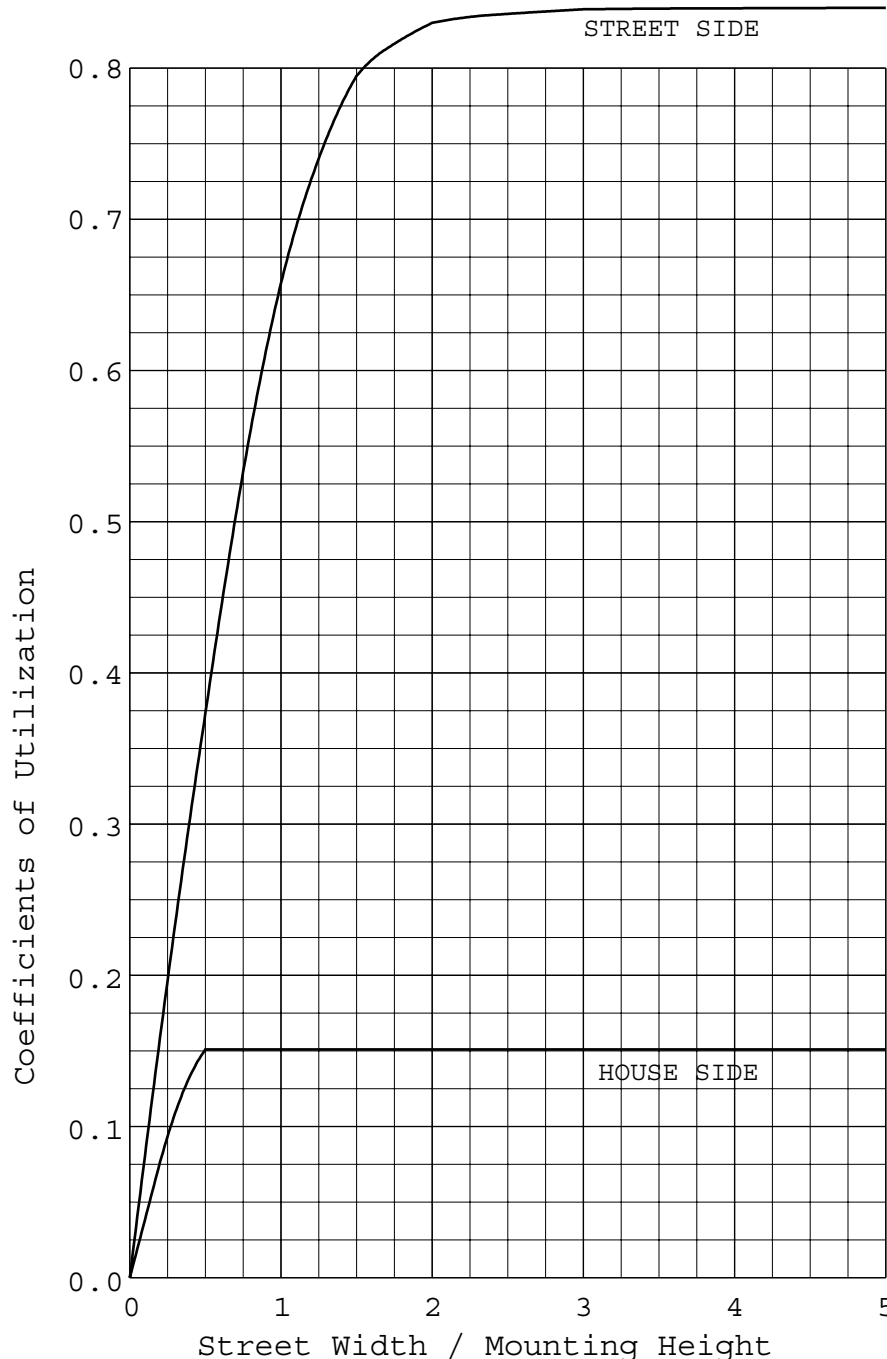




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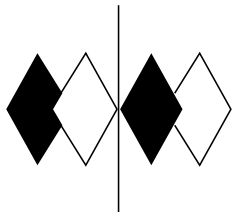
PAGE: 3 OF 7

COEFFICIENTS OF UTILIZATION AND FLUX DISTRIBUTION



	LUMENS	PERCENT OF FIXTURE
DOWNWARD STREET SIDE	130.4	84.1
DOWNWARD HOUSE SIDE	24.4	15.7
DOWNWARD TOTAL	154.8	99.8
UPWARD STREET SIDE	0.3	0.2
UPWARD HOUSE SIDE	0.0	0.0
UPWARD TOTAL	0.3	0.2
TOTAL FLUX	155.1	100.0
EFFICACY = 29.9 Lm/W		

ALL CANDELA AND LUMENS IN THIS REPORT ARE BASED ON ABSOLUTE PHOTOMETRY.
THE COEFFICIENT OF UTILIZATION VALUES ARE BASED ON THE TOTAL ABSOLUTE
LUMEN OUTPUT OF THIS LUMINAIRE SAMPLE.



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PAGE: 4 OF 7

FLUX DISTRIBUTION BY SOLID ANGLE

(PER IESNA TM-15-07, LUMINAIRE CLASSIFICATION
SYSTEM FOR OUTDOOR LUMINAIRES)

	LUMENS	PERCENT OF FIXTURE	BUG ZONE RATINGS
FORWARD LIGHT	130.4	84.1	
FL (0- 30)	35.5	22.9	
FM (30- 60)	81.6	52.6	
FH (60- 80)	13.2	8.5	G0
FVH(80- 90)	0.2	0.1	U0 G0
BACK LIGHT	24.4	15.7	
BL (0- 30)	16.7	10.8	B0
BM (30- 60)	7.7	4.9	B0
BH (60- 80)	0.0	0.0	B0 G0
BVH(80- 90)	0.0	0.0	U0 G0
UPLIGHT	0.3	0.2	
UL (90-100)	0.1	0.1	U1
UH (100-180)	0.2	0.1	U1
TRAPPED LIGHT	0.0	0.0	
TOTAL FLUX	155.1	100.0	

BACKLIGHT, UPLIGHT, AND GLARE (BUG) RATINGS
(PER ADDENDUM A FOR IESNA TM-15-07)

BUG RATING: B0 U1 G0



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PAGE: 5 OF 7

CANDELA TABULATION

STREET SIDE		LATERAL ANGLE										
	0.0	5.0	15.0	25.0	35.0	45.0	55.0	65.0	75.0	85.0	90.0	
	180.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	175.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	165.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	155.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	145.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	135.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	125.0	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	
	115.0	0.3	0.3	0.3	0.3	0.2	0.0	0.0	0.0	0.0	0.0	
	105.0	0.3	0.3	0.3	0.3	0.2	0.0	0.0	0.0	0.0	0.0	
	95.0	0.5	0.5	0.5	0.5	0.5	0.1	0.1	0.0	0.0	0.0	
	92.5	0.6	0.6	0.6	0.6	0.5	0.4	0.1	0.1	0.0	0.0	
	90.0	0.6	0.6	0.6	0.6	0.5	0.4	0.3	0.1	0.0	0.0	
	87.5	0.6	0.6	0.6	0.6	0.5	0.4	0.4	0.1	0.1	0.0	
	85.0	0.6	0.6	0.6	0.6	0.5	0.4	0.5	0.2	0.1	0.1	
V	82.5	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.2	0.1	0.1	
E	80.0	0.7	0.6	0.6	0.7	0.6	0.5	0.5	0.3	0.2	0.1	
R	77.5	0.7	0.7	0.7	0.7	0.6	0.7	1.7	0.4	0.2	0.2	
T	75.0	0.7	0.7	0.8	0.8	0.8	1.4	8.3	0.8	0.3	0.2	
I	72.5	0.9	0.9	0.9	1.0	1.4	4.4	19.1	6.1	0.6	0.2	
C	70.0	1.2	1.2	1.4	1.9	3.9	12.8	30.2	19.7	3.4	0.3	
A	67.5	2.3	2.4	3.0	5.0	11.5	24.2	40.4	33.8	13.3	0.4	
L	65.0	5.8	6.0	8.0	13.4	23.2	36.6	48.9	42.6	26.8	1.4	
	62.5	14.8	15.3	18.8	25.9	36.3	49.0	54.5	47.2	36.7	16.3	
A	60.0	27.6	28.0	32.1	39.8	49.7	59.9	58.5	50.8	41.7	31.3	
N	57.5	41.6	42.1	46.6	54.6	62.6	67.0	61.9	54.1	45.4	36.4	
G	55.0	55.9	56.3	60.7	68.7	72.7	71.0	64.7	57.1	48.6	40.0	
L	52.5	69.2	69.7	73.6	80.3	78.3	73.7	67.3	59.8	51.6	43.4	
E	50.0	80.6	80.9	83.3	87.0	81.7	76.0	69.5	62.3	54.6	46.9	
	47.5	87.4	87.4	88.1	90.1	84.2	78.0	71.6	64.6	57.4	50.6	
	45.0	90.2	90.2	90.1	91.5	86.6	79.7	73.3	66.6	60.0	54.0	
	42.5	91.6	91.5	91.2	92.2	88.9	81.1	75.0	68.5	62.5	57.1	
	40.0	92.6	92.6	92.1	92.4	90.7	82.6	76.6	70.3	65.0	60.0	
	37.5	93.0	93.0	92.3	92.5	91.5	83.7	77.8	72.0	67.3	62.6	
	35.0<<	93.5	93.1	92.5	92.5	91.6	84.8	79.0	73.5	69.3	65.1	
	32.5	93.3	93.1	92.5	92.1	91.3	85.8	80.1	75.1	71.2	67.4	
	30.0	92.9	92.8	92.1	91.4	90.5	86.3	81.1	76.7	73.1	69.6	
	25.0	92.1	91.9	91.3	90.3	89.2	86.6	83.0	79.9	76.2	73.1	
	20.0	90.4	90.2	89.7	88.8	87.5	86.0	84.0	81.3	78.5	75.9	
	15.0	88.7	88.6	88.2	87.5	86.6	85.7	84.1	82.2	80.1	78.2	
	10.0	86.9	86.9	86.7	86.1	85.3	84.4	83.1	82.0	80.7	79.4	
	5.0	84.4	84.4	84.2	84.0	83.6	83.0	82.5	81.8	81.1	80.3	
	0.0	80.7	80.7	80.7	80.7	80.7	80.7	80.7	80.7	80.7	80.7	
	PLANE OF MAXIMUM CANDELA											
	CONE OF MAXIMUM CANDELA											



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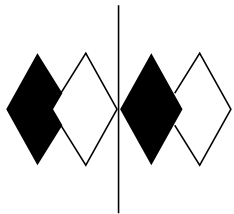
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CANDELA TABULATION

	HOUSE SIDE		LATERAL ANGLE							
	95.0	105.0	115.0	125.0	135.0	145.0	155.0	165.0	175.0	180.0
180.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V 82.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E 80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
R 77.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
T 75.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I 72.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C 70.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A 67.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
L 65.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62.5	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A 60.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
N 57.5	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
G 55.0	1.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
L 52.5	16.9	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E 50.0	37.6	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47.5	43.0	2.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45.0	47.6	4.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42.5	51.9	16.9	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40.0	55.4	43.7	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37.5	58.6	52.9	6.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0
35.0<<	61.7	56.7	7.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0
32.5	65.0	60.6	8.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0
30.0	66.9	64.0	13.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0
25.0	70.4	67.9	63.6	10.3	5.1	0.2	0.0	0.0	0.0	0.0
20.0	73.7	71.3	68.9	64.3	11.8	10.6	5.7	0.8	0.2	0.2
15.0	76.3	74.7	73.1	71.4	69.4	56.5	21.2	12.7	12.2	12.2
10.0	78.2	77.2	76.1	75.2	74.4	73.6	73.0	72.5	72.1	72.1
5.0	79.7	79.1	78.6	78.2	77.9	77.5	77.3	77.1	77.1	76.9
0.0	80.7	80.7	80.7	80.7	80.7	80.7	80.7	80.7	80.7	80.7

CONE OF MAXIMUM CANDELA



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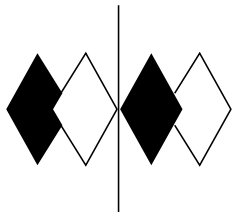
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ADDRESS: 170 LUDLOW AVE
NORTHVALE, NJ 07647

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REPORT NUMBER: ITL67906

DATE: 04/04/11

PREPARED FOR: RAB LIGHTING, INC.

Page 1 of 3

ADDRESS: 170 LUDLOW AVE
NORTHVALE, NJ 07647

CATALOG NUMBER: SLED5N-BLED5N

LUMINAIRE: CAST BROWN PAINTED METAL HOUSING WITH HORIZONTALLY GROOVED SURFACE BELOW APERTURE, ONE CIRCUIT BOARD WITH ONE LED, FORMED SEMI-SPECULAR METAL REFLECTOR, CLEAR GLASS LENS, FORMED BROWN PAINTED METAL LENS FRAME.

LAMPS: ONE WHITE MULTI-CHIP LIGHT EMITTING DIODE (LED) WITH LEDS ARRANGED IN AN ARRAY OF THREE LINEAR ROWS, TILTED 38-DEGREES FROM VERTICAL BASE-UP POSITION.

DRIVER: LINKCOM BPHE005C401-50

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (120VAC, 60HZ) TO THE LED DRIVER.

INSTRUMENTS: Kikusui PCR500L AC Power Source
Yokogawa WT210 Digital Power Meter
Optronic Laboratories OL770 Spectroradiometer
ITL 1.5 Meter Diameter Integrating Sphere, 4 π Geometry

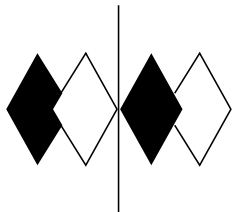
OBJECT OF TEST: Measure the Total Radiant Flux, Spectral Power Distribution (SPD), Correlated Color Temperature (CCT), Color Rendering Indices (CRI_a,9), Chromaticity Coordinates (x,y; u',v'), ANSI C78.377 Duv, and electrical data including Power Factor (PF), Total Harmonic Distortion (THD) and Off-State Power to the luminaire.

PROCEDURE: The luminaire was provided by the customer and had an unknown number of burn hours. The luminaire was mounted inside the integrating sphere in a vertical position (see luminaire description for LED orientation). The luminaire was allowed to stabilize at 120VAC input. After stabilization occurred, Total Radiant Flux, Spectral Power Distribution (SPD), Correlated Color Temperature (CCT), Color Rendering Indices (CRI_a,9), Chromaticity Coordinates (x,y; u',v'), ANSI C78.377 Duv, and electrical data including Power Factor (PF) and Total Harmonic Distortion (THD) were measured with the luminaire operating in the integrating sphere. In order to measure mean performance, multiple data sets were recorded and averaged. Readings were taken with the luminaire operating at 120VAC input in a 25 +/-1 degree Celsius free air ambient and in accordance with IESNA LM-79-08. All data are traceable to the National Institute of Standards and Technology. Off-State Power is reported with no voltage applied to the luminaire.

RESULTS: (continued subsequent pages)

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Checked	<i>N Gully</i>
Approved	<i>R Bergin</i> Lighting Engineer



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NVLAP
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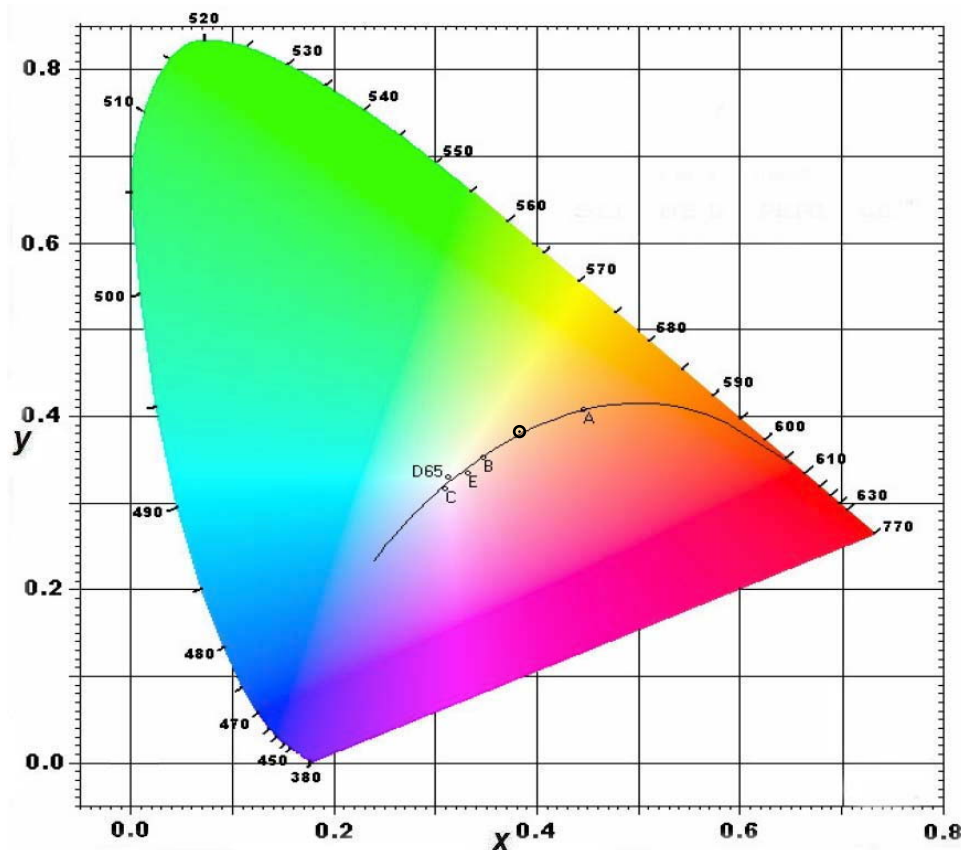
PREPARED FOR: RAB LIGHTING, INC.

CATALOG NUMBER: SLED5N-BLED5N

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RESULTS:

CIE Chromaticity Diagram



SPECTRORADIOMETRIC	
Observer	CIE 1931 2 degree
Chromaticity Ordinate x	0.3827
Chromaticity Ordinate y	0.3819
Chromaticity Ordinate u'	0.2245
Chromaticity Ordinate v'	0.5042
Correlated Color Temp CCT (K)	3976
Color Rendering Index (CRIa)	85
Color Rendering Index 9 (Strong red)	44
Total Radiant Flux (milliWatts)	518
ANSI C78.377-2008 Duv	0.002
ELECTRICAL	
Input Voltage (Volts AC)	120.0
Input Current (mA AC)	98.3
Input Power (Watts)	5.16
Input Power Factor (%)	43.7
Input Current THD (%)	198.6
Input Voltage THD (%)	0.1
Off State Power (Watts)	0.0

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REPORT NUMBER: ITL67906

DATE: 04/04/11

PREPARED FOR: RAB LIGHTING, INC.

CATALOG NUMBER: SLED5N-BLED5N

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RESULTS:

Wavelength	mW per nm	Wavelength	mW per nm	Wavelength	mW per nm
380	0.041	515	1.688	650	1.930
385	0.037	520	1.834	655	1.829
390	0.039	525	1.967	660	1.718
395	0.042	530	2.076	665	1.597
400	0.048	535	2.148	670	1.478
405	0.058	540	2.216	675	1.348
410	0.075	545	2.272	680	1.232
415	0.105	550	2.321	685	1.115
420	0.165	555	2.357	690	1.005
425	0.285	560	2.385	695	0.898
430	0.508	565	2.404	700	0.798
435	0.872	570	2.415	705	0.705
440	1.455	575	2.419	710	0.619
445	2.361	580	2.415	715	0.541
450	2.900	585	2.411	720	0.471
455	2.331	590	2.403	725	0.411
460	1.567	595	2.394	730	0.357
465	1.187	600	2.385	735	0.309
470	0.902	605	2.376	740	0.267
475	0.694	610	2.362	745	0.229
480	0.628	615	2.344	750	0.198
485	0.648	620	2.320	755	0.170
490	0.731	625	2.285	760	0.146
495	0.886	630	2.237	765	0.125
500	1.087	635	2.180	770	0.108
505	1.295	640	2.111	775	0.092
510	1.496	645	2.024	780	0.079

