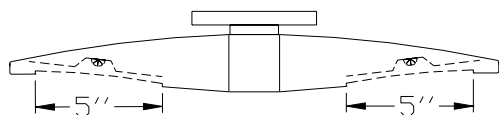
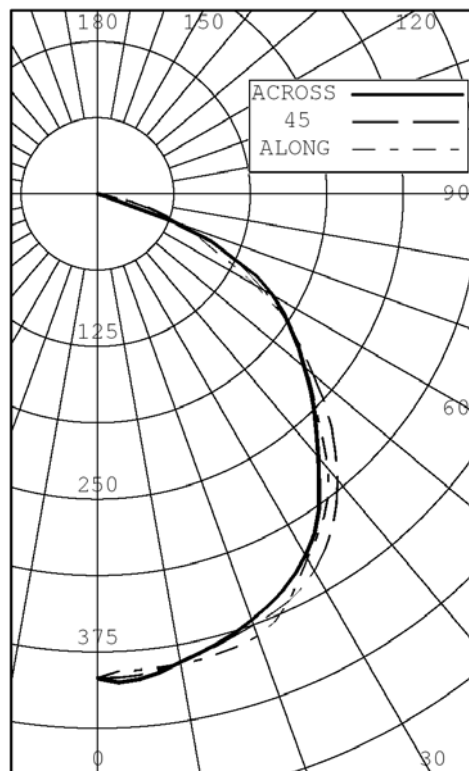




INDEPENDENT TEST LABORATORY REPORT No. 27576

RAB LIGHTING - LED CEILING LUMINAIRE, CAT# CLED/PLED2X10
WITH SPECULAR REFLECTOR AND CLEAR FLAT GLASS LENSES
TWO LED ARRAYS. LUMINAIRE OUTPUT = 1045 LMS
LUMINAIRE OPERATING AT 120 VAC AND 25.7 WATTS



INTENSITY (CANDLEPOWER) SUMMARY						OUTPUT LUMENS
ANGLE	ALONG	22.5	45	67.5	ACROSS	
0	397	397	397	397	397	
5	391	390	395	400	399	38
10	391	390	390	391	390	
15	389	388	382	381	381	108
20	385	379	375	371	371	
25	369	367	368	361	358	168
30	344	350	356	347	341	
35	323	325	334	327	315	203
40	293	295	305	296	281	
45	254	265	271	262	250	202
50	223	231	230	231	221	
55	192	193	194	197	193	173
60	149	156	156	163	165	
65	101	106	119	126	120	115
70	76	74	76	77	66	
75	46	46	41	11	5	37
80	8	13	6	1	0	
85	1	0	0	0	0	1
90	0	0	0	0	0	

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	314	30.08
0-40	517	49.51
0-60	892	85.41
0-90	1045	100.00
40-90	527	50.49
60-90	152	14.59
90-180	0	0.00
0-180	1045	100.00

EFFICACY (LUMENS PER WATT): 40.7

*** THIS IS AN ABSOLUTE TEST ***

LUMINOUS LENGTH: 10.000 INS
WIDTH: 3.750 INS

LUMINANCE SUMMARY CD./SQ.M.

ANGLE	ALONG	45	ACROSS
45	14819	15876	14691
55	13811	13998	13938
65	9881	11670	11766
75	7390	6594	745
85	265	204	163

TESTED IN ACCORDANCE WITH IES PROCEDURES.

CERTIFIED BY: S/MH: 1.3
SC: 1.3

James E. Walker III

DATE:
AUG 23, 2010

PREPARED FOR:
RAB LIGHTING
NORTHVALE, NJ

LIGHTING SCIENCES, INC.
7826 E. EVANS RD.
SCOTTSDALE, AZ, USA 85260

INDEPENDENT TEST LABORATORY REPORT No. 27576

RAB LIGHTING - LED CEILING LUMINAIRE, CAT# CLED/PLED2X10
WITH SPECULAR REFLECTOR AND CLEAR FLAT GLASS LENSES
TWO LED ARRAYS. LUMINAIRE OUTPUT = 1045 LMS
LUMINAIRE OPERATING AT 120 VAC AND 25.7 WATTS

INTENSITY (CANDLEPOWER) DATA
IN 2.5 DEGREE STEPS

ANGLE	PLANE						OUTPUT LUMENS
	ALONG	22.5	45	67.5	ACROSS	AVERAGE	
0.0	397	397	397	397	397	397	
2.5	391	391	397	402	401	396	
5.0	391	390	395	400	399	395	38
7.5	391	390	393	396	395	393	
10.0	391	390	390	391	390	390	
12.5	391	389	386	385	386	387	
15.0	389	388	382	381	381	384	108
17.5	388	384	378	376	376	380	
20.0	385	379	375	371	371	376	
22.5	379	374	372	366	365	371	
25.0	369	367	368	361	358	365	168
27.5	356	360	363	355	350	358	
30.0	344	350	356	347	341	349	
32.5	333	339	346	338	330	339	
35.0	323	325	334	327	315	326	203
37.5	310	310	321	312	297	312	
40.0	293	295	305	296	281	296	
42.5	272	279	288	279	265	278	
45.0	254	265	271	262	250	262	202
47.5	238	249	251	246	236	246	
50.0	223	231	230	231	221	228	
52.5	208	213	212	214	207	212	
55.0	192	193	194	197	193	194	173
57.5	174	175	176	180	180	177	
60.0	149	156	156	163	165	158	
62.5	124	132	138	147	148	138	
65.0	101	106	119	126	120	115	115
67.5	88	86	99	102	100	95	
70.0	76	74	76	77	66	74	
72.5	59	61	55	40	16	48	
75.0	46	46	41	11	5	31	37
77.5	33	34	27	2	1	20	
80.0	8	13	6	1	0	6	
82.5	2	2	1	0	1	1	
85.0	1	0	0	0	0	0	1
87.5	0	0	0	0	0	0	
90.0	0	0	0	0	0	0	

LIGHTING SCIENCES, INC.
7826 E. EVANS RD.
SCOTTSDALE, AZ, USA 85260

INDEPENDENT TEST LABORATORY REPORT No. 27576

RAB LIGHTING - LED CEILING LUMINAIRE, CAT# CLED/PLED2X10
WITH SPECULAR REFLECTOR AND CLEAR FLAT GLASS LENSES
TWO LED ARRAYS. LUMINAIRE OUTPUT = 1045 LMS
LUMINAIRE OPERATING AT 120 VAC AND 25.7 WATTS

AVERAGE LUMINANCE DATA

CD./SQ.M (FOOTLAMBERTS)

ANGLE	ALONG	22.5	45	67.5	ACROSS
0	16390 (4783)	16390 (4783)	16390 (4783)	16390 (4783)	16390 (4783)
30	16420 (4792)	16763 (4892)	17015 (4966)	16615 (4849)	16264 (4747)
40	15823 (4618)	15946 (4654)	16486 (4811)	15998 (4669)	15154 (4422)
45	14819 (4325)	15485 (4519)	15876 (4633)	15345 (4478)	14691 (4287)
50	14350 (4188)	14921 (4355)	14793 (4317)	14864 (4338)	14201 (4144)
55	13811 (4031)	13957 (4073)	13998 (4085)	14229 (4153)	13938 (4068)
60	12306 (3591)	12941 (3777)	12935 (3775)	13522 (3946)	13644 (3982)
65	9881 (2884)	10333 (3016)	11670 (3406)	12325 (3597)	11766 (3434)
70	9146 (2669)	8975 (2619)	9193 (2683)	9358 (2731)	7954 (2321)
75	7390 (2157)	7349 (2145)	6594 (1924)	1738 (507)	745 (217)
80	1957 (571)	3044 (888)	1491 (435)	215 (62)	0 (0)
85	265 (77)	163 (47)	204 (59)	204 (59)	163 (47)

LIGHTING SCIENCES, INC.
7826 E. EVANS RD.
SCOTTSDALE, AZ, USA 85260

INDEPENDENT TEST LABORATORY REPORT No. 27576

RAB LIGHTING - LED CEILING LUMINAIRE, CAT# CLED/PLED2X10
WITH SPECULAR REFLECTOR AND CLEAR FLAT GLASS LENSES
TWO LED ARRAYS. LUMINAIRE OUTPUT = 1045 LMS
LUMINAIRE OPERATING AT 120 VAC AND 25.7 WATTS

COEFFICIENTS OF UTILIZATION

ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE = .20

CC WALL	90				80				70				50				30				10				0
	70	50	30	10	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																									
0	1.221	1.221	1.221	1.22	1.191	1.191	1.191	1.19	1.161	1.161	1.161	1.16	1.111	1.111	1.11	1.061	1.061	1.06	1.021	1.021	1.02	1.00			
1	1.131	1.091	1.051	1.02	1.111	1.071	1.031	1.00	1.081	1.051	1.020	0.99	1.000	0.980	0.96	0.970	0.950	0.93	0.930	0.910	0.90	0.88			
2	1.040	0.970	0.910	0.86	1.020	0.950	0.900	0.85	1.000	0.930	0.880	0.84	0.900	0.860	0.82	0.870	0.830	0.80	0.840	0.810	0.78	0.76			
3	0.960	0.860	0.790	0.73	0.940	0.850	0.780	0.72	0.920	0.830	0.770	0.72	0.810	0.750	0.70	0.780	0.730	0.69	0.760	0.720	0.68	0.66			
4	0.890	0.770	0.690	0.62	0.870	0.760	0.680	0.62	0.850	0.750	0.670	0.61	0.720	0.660	0.61	0.700	0.640	0.60	0.680	0.630	0.59	0.57			
5	0.820	0.690	0.600	0.53	0.790	0.670	0.590	0.53	0.770	0.660	0.580	0.53	0.640	0.570	0.52	0.620	0.560	0.51	0.600	0.550	0.51	0.49			
6	0.750	0.610	0.530	0.46	0.730	0.600	0.520	0.46	0.710	0.590	0.510	0.46	0.580	0.510	0.45	0.560	0.500	0.45	0.550	0.490	0.44	0.43			
7	0.690	0.550	0.460	0.41	0.670	0.540	0.460	0.40	0.660	0.540	0.460	0.40	0.520	0.450	0.40	0.500	0.440	0.39	0.490	0.430	0.39	0.37			
8	0.630	0.490	0.410	0.35	0.620	0.490	0.410	0.35	0.600	0.480	0.400	0.35	0.470	0.390	0.34	0.450	0.390	0.34	0.440	0.380	0.34	0.32			
9	0.580	0.450	0.360	0.30	0.570	0.440	0.360	0.30	0.560	0.430	0.350	0.30	0.420	0.350	0.30	0.410	0.340	0.30	0.400	0.340	0.29	0.28			
10	0.540	0.400	0.320	0.27	0.530	0.400	0.320	0.26	0.520	0.390	0.320	0.26	0.380	0.310	0.26	0.370	0.310	0.26	0.360	0.300	0.26	0.24			

THE ABOVE COEFFICIENTS HAVE BEEN CALCULATED BASED ON LUMINAIRE LUMENS
BECAUSE IN AN ABSOLUTE TEST THE BARE LAMP LUMENS ARE UNKNOWN.
LIGHTING DESIGN CALCULATIONS MADE USING THESE COEFFICIENTS SHOULD
THEREFORE USE THE LUMINAIRE LUMENS IN THE CALCULATION FORMULA

LUMINAIRE INPUT WATTS 25.7

LABORATORY RESULTS MAY NOT BE REPRESENTATIVE OF FIELD PERFORMANCE.
BALLAST AND FIELD FACTORS HAVE NOT BEEN APPLIED.

TEST DISTANCE EXCEEDS FIVE TIMES THE GREATEST
LUMINOUS OPENING OF LUMINAIRE.

LIGHTING SCIENCES, INC.
7826 E. EVANS RD.
SCOTTSDALE, AZ, USA 85260

INDEPENDENT TEST LABORATORY REPORT No. 27576

RAB LIGHTING - LED CEILING LUMINAIRE, CAT# CLED/PLED2X10
WITH SPECULAR REFLECTOR AND CLEAR FLAT GLASS LENSES
TWO LED ARRAYS. LUMINAIRE OUTPUT = 1045 LMS
LUMINAIRE OPERATING AT 120 VAC AND 25.7 WATTS

ELECTRICAL MEASUREMENTS

INPUT VOLTAGE:	120.0	VOLTS AC
INPUT CURRENT:	0.375	AMPS
INPUT POWER:	25.7	WATTS
POWER FACTOR:	57.1	PERCENT
TOTAL HARMONIC DISTORTION:	77.45	PERCENT
OFF STATE POWER:	0.00	WATTS

LIGHT OUTPUT

LUMENS:	1045	lm
EFFICACY:	40.7	lm/W

SPECTRAL MEASUREMENTS

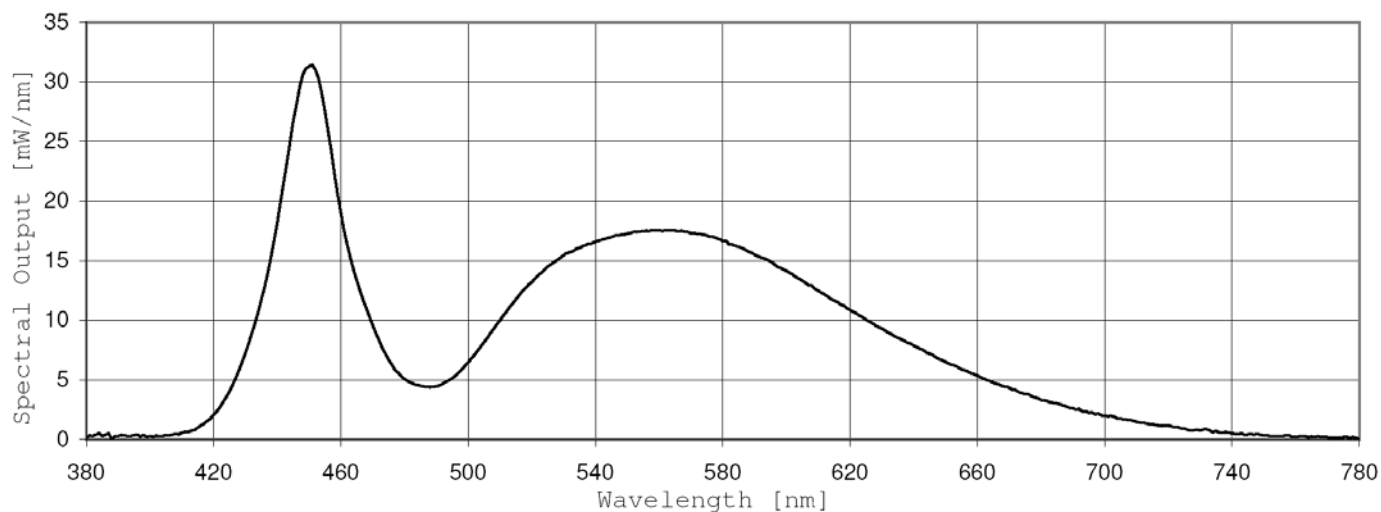
X:	0.3240	
y:	0.3353	
u/u':	0.2033	
v:	0.3155	
v':	0.4733	
Duv:	0.0010	
CRI (R _a):	74.7	
CRI (R _g):	-12.8	
CCT:	5892	K
RADIANT FLUX:	3287	mW

LIGHTING SCIENCES, INC.
7826 E. EVANS RD.
SCOTTSDALE, AZ, USA 85260

INDEPENDENT TEST LABORATORY REPORT No. 27576

RAB LIGHTING - LED CEILING LUMINAIRE, CAT# CLED/PLED2X10
WITH SPECULAR REFLECTOR AND CLEAR FLAT GLASS LENSES
TWO LED ARRAYS. LUMINAIRE OUTPUT = 1045 LMS
LUMINAIRE OPERATING AT 120 VAC AND 25.7 WATTS

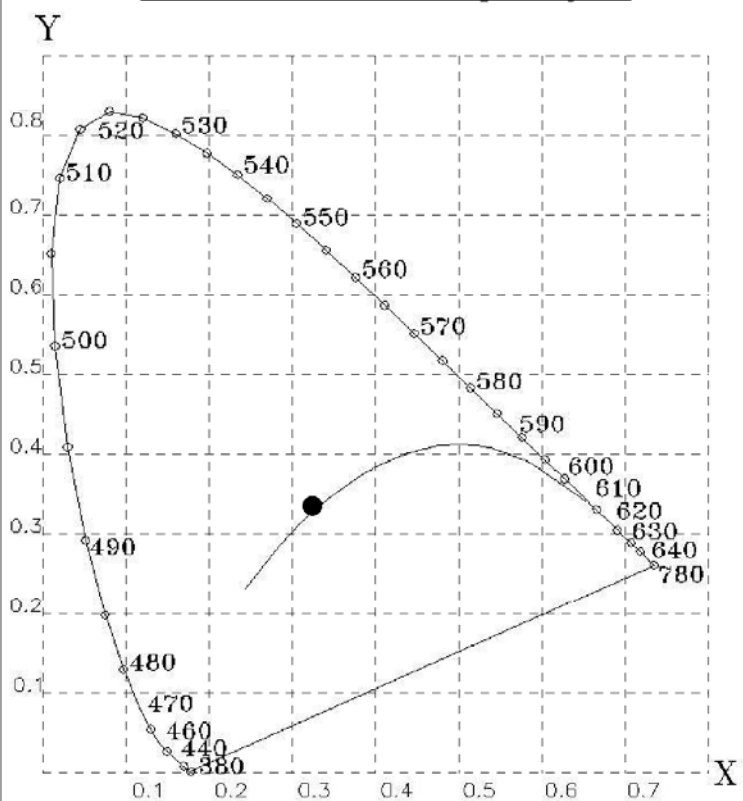
Spectral Power Distribution



Tabulated Spectral Power Distribution

Wavelength [nm]	[mW/nm]	Wavelength [nm]	[mW/nm]
380	0.13252	590	15.51015
390	0.28964	600	14.14963
400	0.29123	610	12.49787
410	0.57849	620	10.87905
420	2.09534	630	9.32093
430	7.25614	640	7.88145
440	18.18677	650	6.52925
450	31.30241	660	5.35600
460	18.98665	670	4.36725
470	9.58558	680	3.32057
480	5.07231	690	2.62384
490	4.46843	700	2.01797
500	6.48442	710	1.48948
510	10.00893	720	1.18634
520	13.19579	730	0.75228
530	15.46928	740	0.52731
540	16.61436	750	0.35154
550	17.27459	760	0.21307
560	17.56780	770	0.19640
570	17.31308	780	0.03174
580	16.65801		

CIE 1931 Chromaticity Diagram



LIGHTING SCIENCES, INC.
7826 E. EVANS RD.
SCOTTSDALE, AZ, USA 85260

INDEPENDENT TEST LABORATORY REPORT No. 27576

RAB LIGHTING - LED CEILING LUMINAIRE, CAT# CLED/PLED2X10
WITH SPECULAR REFLECTOR AND CLEAR FLAT GLASS LENSES
TWO LED ARRAYS. LUMINAIRE OUTPUT = 1045 LMS
LUMINAIRE OPERATING AT 120 VAC AND 25.7 WATTS

SIDE VIEW



LUMINOUS OPENING



All testing was conducted in accordance with LM-79-08,

Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products as published by the Illuminating Engineering Society of North America (IESNA).

The condition of the item tested was new. Stabilization time before testing exceeded 16 hours.

The test results (luminous distribution and flux) were obtained by using a Lighting Sciences series 6000 Type C Moving Mirror Goniophotometer

- The photometric reference standard used is a set of three incandescent luminous intensity standard lamps calibrated and traceable to the U.S. National Institute of Standards and Technology.

The test results (colorimetric and luminous flux) were obtained by using a Lighting Sciences model 4000 Integrating Sphere of either 1 or 2 meters diameter, having an internal reflectance exceeding 0.80. 4π geometry was used. Correction factors were applied for spectral mismatch and self-absorption. The spectroradiometer employed was a LSC model 500E having a bandwidth of .84.

- The photometric reference standard used is a set of three incandescent luminous flux standard lamps calibrated and traceable to the U.S. National Institute of Standards and Technology.
- The colorimetric reference standard used is an incandescent spectral standard lamp calibrated and traceable to the U.S. National Institute of Standards and Technology.

Power measurements were obtained with a Yokogawa WT210 power analyzer.

Ambient temperature during testing was $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$, measured using an Omega model DP460.

Calibration certificates are on file at the laboratories of Lighting Sciences Inc.