

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P243192

Luminaire Tested: S122DRP-H1005D835-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243192
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-53)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122DRP-H1005D835-X4F0-XX-UDD-D-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

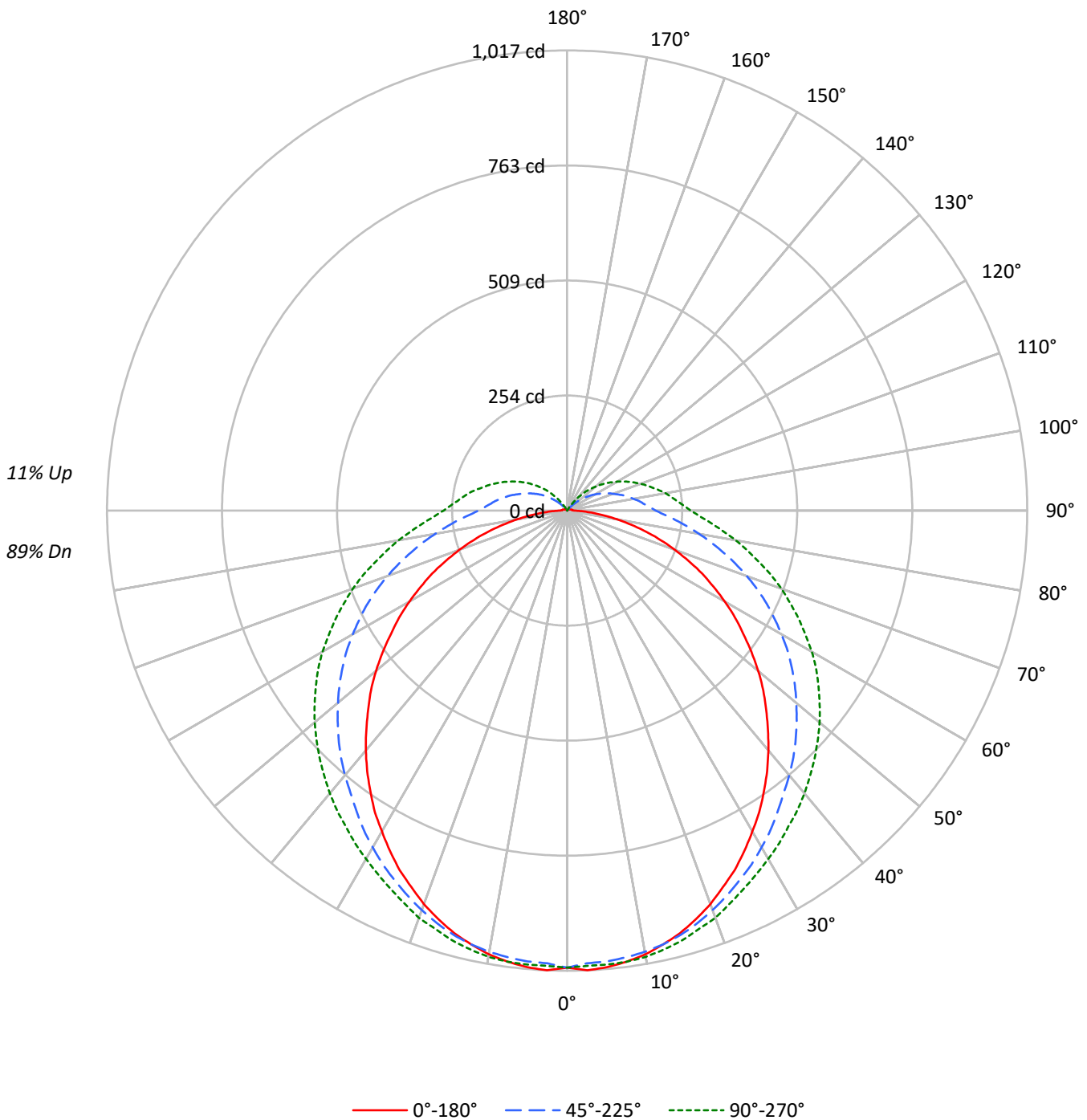
Lumens per Lamp: N/A
Luminaire Lumens: 3875.5 lumens
Efficiency: N/A
Efficacy: 102.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.15' x L: 3.88' x H: 0.08')
CIE Type: Semi-Direct

Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	116	116	116	116	112	112	112	112	105	105	105	98	98	98	92	92	92	89
1	104	98	93	88	100	95	90	86	88	84	81	82	79	76	77	74	72	69
2	93	84	77	70	90	81	74	68	76	70	65	71	66	62	66	62	59	56
3	85	73	64	57	81	71	63	56	66	59	54	62	56	51	58	53	49	46
4	77	64	55	48	74	62	54	47	58	51	45	55	48	43	51	46	41	39
5	71	57	48	41	68	55	47	40	52	44	39	49	42	37	46	40	36	33
6	65	51	42	35	63	50	41	35	47	39	34	44	37	32	41	36	31	29
7	60	46	37	31	58	45	37	30	42	35	29	40	33	28	38	32	28	25
8	56	42	33	27	54	41	33	27	39	31	26	37	30	25	35	29	25	22
9	52	39	30	25	50	38	30	24	36	28	24	34	27	23	32	26	22	20
10	49	36	28	22	47	35	27	22	33	26	21	31	25	21	30	24	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19238	19238	19238
5°	19329	18446	18339
10°	19189	17835	17598
15°	18946	17207	16814
20°	18616	16524	16074
25°	18234	15850	15312
30°	17786	15218	14703
35°	17369	14589	14157
40°	16904	14049	13711
45°	16395	13563	13261
50°	15931	13063	12844
55°	15317	12594	12398
60°	14775	12076	11957
65°	14179	11551	11425
70°	13314	10922	10913
75°	12365	10253	10311
80°	10999	9593	9788
85°	9631	9075	9266

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 16395 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.8	2.5
10°-20°	274.9	7.1
20°-30°	416.4	10.7
30°-40°	507.9	13.1
40°-50°	546.6	14.1
50°-60°	531.4	13.7
60°-70°	464.6	12.0
70°-80°	357.7	9.2
80°-90°	240.3	6.2
90°-100°	166.4	4.3
100°-110°	122.3	3.2
110°-120°	81.4	2.1
120°-130°	46.1	1.2
130°-140°	19.8	0.5
140°-150°	3.7	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	787.2	20.3
0°-40°	1295.1	33.4
0°-60°	2373.2	61.2
0°-90°	3435.8	88.7
90°-120°	370.1	9.6
90°-150°	439.7	11.3
90°-180°	440.0	11.4
0°-180°	3875.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1010	1010	1010	1010	1010	
5°	1013	1008	1000	1008	1007	96
15°	966	971	971	983	983	272
25°	876	890	902	921	923	403
35°	758	784	812	843	852	474
45°	622	660	715	758	774	480
55°	475	532	606	661	678	426
65°	329	400	487	546	564	324
75°	182	264	357	421	439	191
85°	55	145	240	301	319	56
90°	16	101	196	255	273	10
95°	11	82	170	226	243	9
105°	8	51	129	180	196	9
115°	6	24	90	135	150	6
125°	4	3	54	91	106	3
135°	1	1	18	49	62	2
145°	1	0	0	11	17	1
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1010.0	1010.0	1010.0	1010.0	1010.0
2.5°	1017.0	1012.8	1001.5	1010.0	1007.1
5°	1012.8	1008.5	1000.1	1008.5	1007.1
7.5°	1005.7	1002.9	995.9	1007.1	1005.7
10°	995.9	994.5	990.3	1001.5	1001.5
12.5°	981.8	983.2	981.8	994.5	993.1
15°	966.3	970.6	970.6	983.2	983.2
17.5°	946.7	953.7	956.5	970.6	969.2
20°	925.6	934.0	939.6	955.1	957.9
22.5°	900.2	912.9	921.3	938.2	939.6
25°	876.3	890.4	901.6	921.3	922.7
27.5°	848.2	865.1	882.0	901.6	905.9
30°	818.7	839.8	859.4	883.4	889.0
32.5°	790.5	811.6	836.9	862.3	872.1
35°	758.2	783.5	811.6	842.6	852.4
37.5°	725.8	752.5	786.3	822.9	835.5
40°	692.1	723.0	763.8	803.2	815.8
42.5°	656.9	690.6	739.9	780.7	794.7
45°	621.7	659.7	714.6	758.2	773.6
47.5°	588.0	628.8	687.8	737.1	751.1
50°	551.4	596.4	661.1	711.7	728.6
52.5°	513.4	564.1	634.4	686.4	703.3
55°	475.4	531.7	606.3	661.1	678.0
57.5°	440.3	499.3	578.1	633.0	652.7
60°	402.3	465.6	547.2	604.8	624.5
62.5°	364.3	433.2	516.2	575.3	593.6
65°	329.1	399.5	486.7	545.8	564.1
67.5°	289.8	364.3	454.3	516.2	533.1
70°	253.2	332.0	422.0	483.9	503.6
72.5°	216.6	296.8	389.6	451.5	472.6
75°	181.5	264.4	357.3	420.6	438.9
77.5°	144.9	232.1	326.3	389.6	407.9
80°	112.5	199.7	295.4	358.7	378.4
82.5°	80.2	170.2	267.3	329.1	347.4
85°	54.9	144.9	240.5	301.0	319.3
87.5°	32.4	121.0	215.2	275.7	294.0
90°	15.5	101.3	195.5	254.6	272.9
92.5°	12.7	91.4	181.5	239.1	257.4
95°	11.3	81.6	170.2	226.5	243.3
97.5°	11.3	74.6	160.4	215.2	232.1
100°	9.8	66.1	149.1	202.6	220.8
102.5°	9.8	57.7	139.3	191.3	208.2
105°	8.4	50.6	129.4	180.0	195.5
107.5°	7.0	43.6	118.2	168.8	184.3
110°	7.0	36.6	108.3	157.5	173.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	5.6	30.9	99.9	146.3	161.8
115°	5.6	23.9	90.0	135.0	150.5
117.5°	5.6	16.9	80.2	123.8	139.3
120°	4.2	11.3	71.7	113.9	128.0
122.5°	4.2	7.0	61.9	102.7	116.7
125°	4.2	2.8	53.5	91.4	105.5
127.5°	2.8	2.8	43.6	81.6	94.2
130°	2.8	1.4	35.2	70.3	83.0
132.5°	2.8	1.4	26.7	60.5	71.7
135°	1.4	1.4	18.3	49.2	61.9
137.5°	1.4	1.4	9.8	39.4	49.2
140°	1.4	0.0	4.2	29.5	38.0
142.5°	1.4	0.0	0.0	19.7	28.1
145°	1.4	0.0	0.0	11.3	16.9
147.5°	0.0	0.0	0.0	2.8	8.4
150°	0.0	0.0	0.0	0.0	1.4
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	18.49	19.97	19.02	20.50	21.08	21.55	23.03	22.08	23.56	24.15
	3H	19.99	21.34	20.53	21.88	22.50	24.19	25.54	24.73	26.08	26.70
	4H	20.49	21.78	21.05	22.33	22.97	25.47	26.75	26.03	27.30	27.94
	6H	20.81	22.01	21.39	22.58	23.23	26.79	27.99	27.37	28.56	29.21
	8H	20.89	22.04	21.47	22.63	23.28	27.48	28.62	28.06	29.22	29.87
	12H	20.93	22.03	21.52	22.61	23.30	28.23	29.33	28.82	29.92	30.60
4H	2H	19.61	20.89	20.17	21.45	22.08	21.95	23.23	22.51	23.79	24.42
	3H	21.37	22.47	21.94	23.06	23.72	24.79	25.89	25.37	26.49	27.14
	4H	22.02	23.03	22.61	23.63	24.32	26.23	27.24	26.83	27.85	28.53
	6H	22.47	23.36	23.08	23.99	24.69	27.74	28.63	28.35	29.26	29.96
	8H	22.60	23.44	23.21	24.07	24.78	28.52	29.36	29.14	29.99	30.70
	12H	22.67	23.44	23.31	24.09	24.81	29.39	30.15	30.03	30.81	31.52
8H	4H	22.86	23.70	23.47	24.33	25.04	26.43	27.27	27.04	27.90	28.61
	6H	23.52	24.24	24.17	24.90	25.62	28.09	28.80	28.74	29.47	30.19
	8H	23.75	24.40	24.41	25.08	25.80	29.00	29.64	29.66	30.32	31.05
	12H	23.92	24.50	24.58	25.16	25.95	30.03	30.61	30.69	31.27	32.06
12H	4H	23.09	23.85	23.73	24.51	25.22	26.43	27.20	27.07	27.85	28.57
	6H	23.86	24.51	24.52	25.19	25.92	28.12	28.77	28.78	29.45	30.17
	8H	24.20	24.78	24.87	25.45	26.24	29.09	29.67	29.75	30.34	31.13