

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: P243122

Luminaire Tested: S122DRP-H865D835-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243122
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-48)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122DRP-H865D835-X4F0-XX-UDD-F-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

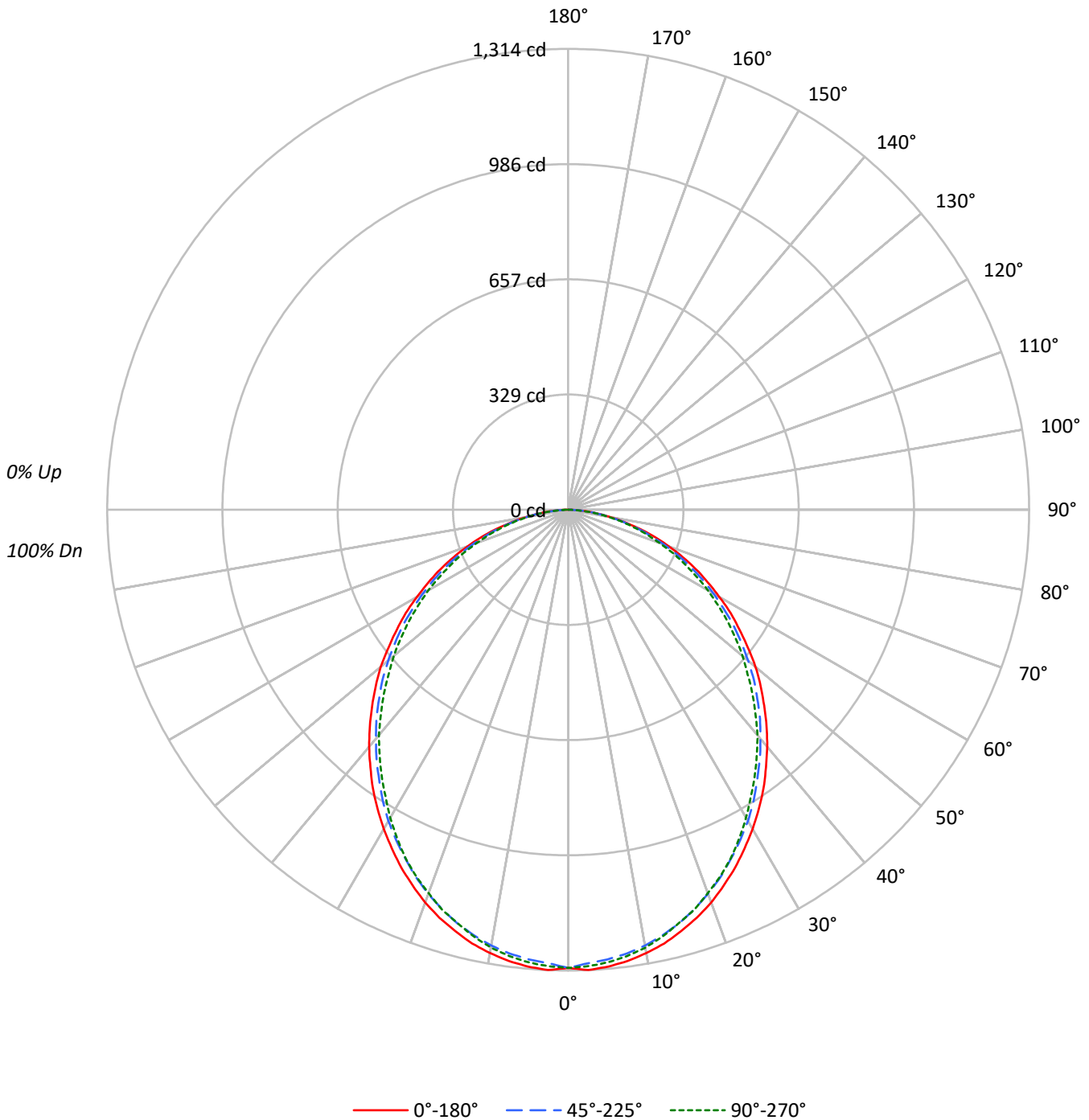
Lumens per Lamp: N/A
Luminaire Lumens: 3324.4 lumens
Efficiency: N/A
Efficacy: 105.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 31.5
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																		
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	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100													100															
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84													84															
2	99	91	85	79	97	89	83	78	86	81	76	83	78	74	80	76	73	71													71															
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	60													60															
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51													51															
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	45													45															
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39													39															
7	66	52	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	35													35															
8	61	48	40	34	60	47	39	34	46	39	33	45	38	33	44	38	33	31													31															
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28													28															
10	54	41	33	28	53	40	33	28	39	32	28	38	32	27	37	32	27	26													26															

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	24884	24884	24884
5°	25004	24612	24772
10°	24827	24407	24523
15°	24527	24078	24054
20°	24164	23627	23578
25°	23661	23079	23053
30°	23121	22538	22300
35°	22567	21839	21560
40°	21946	21197	20869
45°	21278	20532	20012
50°	20660	19839	19232
55°	19792	19115	18394
60°	18945	18210	17524
65°	18127	17258	16496
70°	17031	16162	15354
75°	15506	14888	14182
80°	13470	13075	12549
85°	11583	10272	9463

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 21278 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.0	3.7
10°-20°	346.3	10.4
20°-30°	509.1	15.3
30°-40°	591.1	17.8
40°-50°	590.3	17.8
50°-60°	514.1	15.5
60°-70°	380.2	11.4
70°-80°	214.3	6.4
80°-90°	55.9	1.7
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	978.4	29.4
0°-40°	1569.5	47.2
0°-60°	2673.9	80.4
0°-90°	3324.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3324.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1306	1306	1306	1306	1306	
5°	1308	1302	1287	1298	1296	124
15°	1244	1238	1221	1226	1220	351
25°	1126	1116	1098	1097	1097	518
35°	970	960	939	931	927	606
45°	790	782	762	750	743	610
55°	596	591	576	560	554	534
65°	402	396	383	371	366	398
75°	211	210	202	195	193	224
85°	53	51	47	45	43	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1306.4	1306.4	1306.4	1306.4	1306.4
2.5°	1313.7	1307.7	1294.4	1305.2	1302.8
5°	1307.7	1301.6	1287.2	1298.0	1295.6
7.5°	1298.0	1292.0	1276.3	1287.2	1283.6
10°	1283.6	1276.3	1261.9	1269.1	1267.9
12.5°	1266.7	1259.5	1242.6	1248.7	1246.2
15°	1243.8	1237.8	1221.0	1225.8	1219.8
17.5°	1219.8	1210.1	1194.5	1199.3	1195.7
20°	1192.1	1182.4	1165.6	1168.0	1163.2
22.5°	1159.5	1149.9	1134.3	1134.3	1131.9
25°	1125.8	1116.2	1098.1	1096.9	1096.9
27.5°	1088.5	1080.1	1062.0	1058.4	1056.0
30°	1051.2	1044.0	1024.7	1017.5	1013.9
32.5°	1011.4	1001.8	983.7	975.3	969.3
35°	970.5	959.7	939.2	930.8	927.2
37.5°	926.0	915.1	897.1	889.8	882.6
40°	882.6	873.0	852.5	841.7	839.3
42.5°	836.8	827.2	809.2	797.1	789.9
45°	789.9	781.5	762.2	750.2	742.9
47.5°	744.1	734.5	717.6	703.2	693.6
50°	697.2	687.5	669.5	652.6	649.0
52.5°	645.4	639.4	621.3	605.7	600.8
55°	596.0	591.2	575.6	559.9	553.9
57.5°	549.1	543.0	525.0	512.9	505.7
60°	497.3	493.7	478.0	464.8	460.0
62.5°	449.1	444.3	431.1	417.8	411.8
65°	402.2	396.1	382.9	370.9	366.0
67.5°	354.0	348.0	337.1	327.5	322.7
70°	305.8	301.0	290.2	281.8	275.7
72.5°	258.9	254.1	244.4	236.0	234.8
75°	210.7	209.5	202.3	195.1	192.7
77.5°	166.2	165.0	160.1	156.5	154.1
80°	122.8	122.8	119.2	115.6	114.4
82.5°	84.3	85.5	81.9	79.5	79.5
85°	53.0	50.6	47.0	44.6	43.3
87.5°	21.7	18.1	16.9	13.2	12.0
90°	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	22.45	24.06	22.82	24.38	24.69	22.02	23.63	22.39	23.95	24.26
	3H	24.20	25.66	24.58	25.99	26.35	23.72	25.18	24.10	25.50	25.86
	4H	24.85	26.22	25.25	26.57	26.94	24.35	25.72	24.75	26.07	26.44
	6H	25.31	26.58	25.72	26.94	27.33	24.81	26.08	25.22	26.44	26.83
	8H	25.45	26.66	25.87	27.05	27.45	24.95	26.16	25.38	26.55	26.95
	12H	25.54	26.70	25.97	27.08	27.51	25.03	26.19	25.46	26.57	27.00
4H	2H	23.01	24.38	23.41	24.73	25.10	22.67	24.04	23.07	24.39	24.76
	3H	24.99	26.13	25.40	26.53	26.93	24.59	25.73	25.00	26.13	26.53
	4H	25.77	26.80	26.20	27.22	27.65	25.33	26.37	25.77	26.78	27.22
	6H	26.35	27.26	26.81	27.70	28.15	25.92	26.82	26.37	27.26	27.72
	8H	26.54	27.38	27.00	27.83	28.29	26.10	26.95	26.56	27.39	27.85
	12H	26.67	27.43	27.15	27.91	28.38	26.22	26.98	26.70	27.45	27.92
8H	4H	26.04	26.88	26.50	27.33	27.79	25.66	26.50	26.12	26.94	27.41
	6H	26.74	27.44	27.23	27.93	28.40	26.35	27.05	26.85	27.54	28.02
	8H	26.99	27.62	27.50	28.13	28.62	26.60	27.23	27.11	27.74	28.22
	12H	27.20	27.75	27.70	28.25	28.81	26.78	27.34	27.29	27.83	28.39
12H	4H	26.06	26.82	26.54	27.30	27.77	25.69	26.45	26.17	26.93	27.39
	6H	26.78	27.41	27.29	27.92	28.41	26.41	27.04	26.92	27.55	28.03
	8H	27.09	27.65	27.60	28.14	28.70	26.71	27.27	27.22	27.76	28.32