

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: P242262

Luminaire Tested: S122DRP-S865D835-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242262
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-10)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122DRP-S865D835-X4F0-XX-UDD-F-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

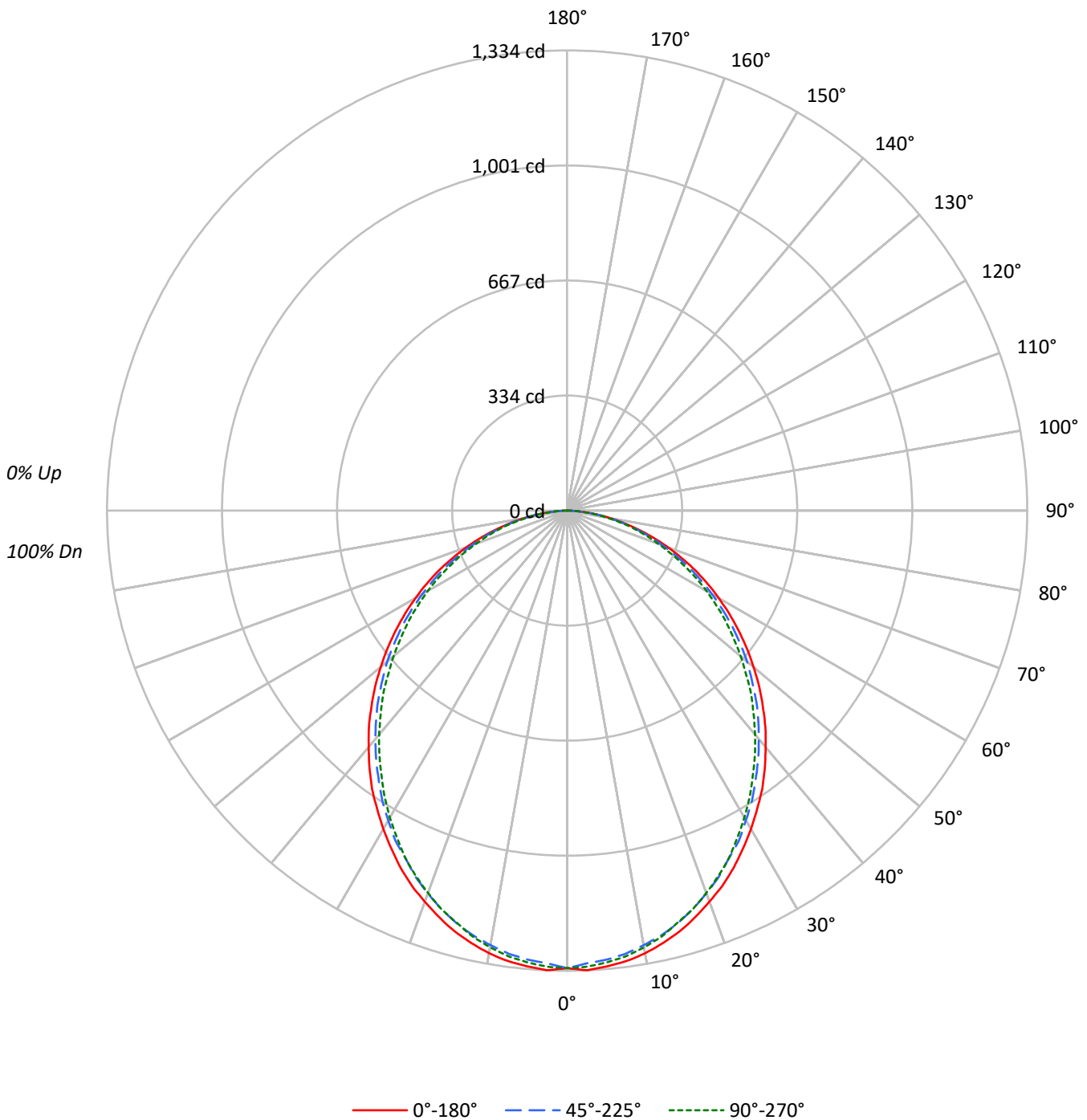
Lumens per Lamp: N/A
Luminaire Lumens: 3374.2 lumens
Efficiency: N/A
Efficacy: 97.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 34.8
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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84				
2	99	91	85	79	97	89	83	78	86	81	76	83	78	74	80	76	73	71				
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	60				
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51				
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	45				
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39				
7	66	52	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	35				
8	61	48	40	34	60	47	39	34	46	39	33	45	38	33	44	38	33	31				
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28				
10	54	41	33	28	53	40	33	28	39	32	27	38	32	27	37	32	27	26				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	25263	25263	25263
5°	25359	24992	25140
10°	25208	24740	24864
15°	24896	24419	24393
20°	24454	23937	23911
25°	24014	23343	23343
30°	23448	22804	22606
35°	22923	22151	21825
40°	22259	21498	21086
45°	21607	20852	20335
50°	20897	20180	19463
55°	20158	19397	18677
60°	19333	18461	17779
65°	18452	17533	16726
70°	17331	16407	15627
75°	15764	15109	14734
80°	13986	13569	12867
85°	11430	10862	9747

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 21607 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.8	3.7
10°-20°	351.2	10.4
20°-30°	516.1	15.3
30°-40°	599.4	17.8
40°-50°	598.7	17.7
50°-60°	522.0	15.5
60°-70°	385.9	11.4
70°-80°	218.3	6.5
80°-90°	57.6	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°	992.2	29.4
0°-40°	1591.6	47.2
0°-60°	2712.3	80.4
0°-90°	3374.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3374.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1326	1326	1326	1326	1326	
5°	1326	1321	1307	1317	1315	126
15°	1262	1255	1238	1243	1237	356
25°	1143	1132	1111	1113	1111	526
35°	986	973	953	945	939	616
45°	802	793	774	760	755	619
55°	607	599	584	569	562	543
65°	409	402	389	378	371	405
75°	214	212	205	198	200	229
85°	52	51	50	46	45	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1326.3	1326.3	1326.3	1326.3	1326.3
2.5°	1333.9	1327.5	1313.5	1326.3	1323.7
5°	1326.3	1321.2	1307.1	1317.3	1314.8
7.5°	1317.3	1309.7	1295.7	1305.9	1303.3
10°	1303.3	1294.4	1279.1	1289.3	1285.5
12.5°	1284.2	1276.5	1261.2	1267.6	1265.0
15°	1262.5	1254.8	1238.3	1243.4	1237.0
17.5°	1235.7	1228.1	1211.5	1217.9	1211.5
20°	1206.4	1198.7	1180.9	1184.7	1179.6
22.5°	1177.1	1165.6	1149.0	1149.0	1146.4
25°	1142.6	1132.4	1110.7	1113.3	1110.7
27.5°	1104.4	1095.4	1078.9	1075.0	1068.7
30°	1066.1	1055.9	1036.8	1033.0	1027.8
32.5°	1025.3	1017.6	997.2	989.6	984.5
35°	985.8	973.0	952.6	945.0	938.6
37.5°	941.1	929.7	909.3	900.3	893.9
40°	895.2	885.0	864.6	853.1	848.0
42.5°	850.6	840.4	820.0	807.2	799.6
45°	802.1	793.2	774.1	760.0	754.9
47.5°	754.9	746.0	725.6	711.6	703.9
50°	705.2	698.8	681.0	663.1	656.8
52.5°	656.8	647.8	631.2	617.2	608.3
55°	607.0	599.4	584.1	568.8	562.4
57.5°	557.3	550.9	534.3	519.0	513.9
60°	507.5	502.4	484.6	470.6	466.7
62.5°	459.1	450.2	437.4	424.7	419.6
65°	409.4	401.7	389.0	377.5	371.1
67.5°	358.3	352.0	340.5	331.6	326.5
70°	311.2	306.1	294.6	285.7	280.6
72.5°	262.7	257.6	251.2	242.3	238.5
75°	214.2	211.7	205.3	197.7	200.2
77.5°	170.9	165.8	163.2	159.4	155.6
80°	127.5	126.2	123.7	119.9	117.3
82.5°	86.7	86.7	85.4	80.3	80.3
85°	52.3	51.0	49.7	45.9	44.6
87.5°	23.0	20.4	17.9	14.0	12.8
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	22.50	24.11	22.87	24.43	24.74	22.06	23.67	22.42	23.98	24.30
	3H	24.25	25.71	24.63	26.03	26.39	23.76	25.22	24.14	25.54	25.90
	4H	24.90	26.27	25.30	26.62	26.99	24.40	25.77	24.80	26.12	26.50
	6H	25.37	26.64	25.78	27.00	27.39	24.87	26.13	25.28	26.50	26.89
	8H	25.51	26.72	25.94	27.11	27.51	25.01	26.22	25.43	26.61	27.01
	12H	25.60	26.76	26.03	27.14	27.57	25.09	26.25	25.52	26.63	27.06
4H	2H	23.06	24.43	23.46	24.78	25.16	22.71	24.08	23.11	24.43	24.80
	3H	25.04	26.18	25.45	26.58	26.98	24.63	25.78	25.04	26.18	26.58
	4H	25.81	26.85	26.25	27.26	27.70	25.39	26.43	25.82	26.84	27.28
	6H	26.41	27.32	26.86	27.76	28.21	25.98	26.88	26.43	27.32	27.78
	8H	26.60	27.45	27.06	27.89	28.35	26.16	27.01	26.62	27.45	27.92
	12H	26.73	27.49	27.21	27.97	28.44	26.28	27.04	26.76	27.52	27.98
8H	4H	26.09	26.93	26.55	27.38	27.84	25.71	26.56	26.17	27.00	27.47
	6H	26.80	27.50	27.30	27.99	28.47	26.42	27.12	26.91	27.61	28.09
	8H	27.06	27.69	27.57	28.20	28.68	26.67	27.30	27.18	27.81	28.29
	12H	27.26	27.82	27.77	28.31	28.87	26.85	27.41	27.35	27.90	28.46
12H	4H	26.11	26.87	26.59	27.35	27.82	25.75	26.51	26.23	26.98	27.45
	6H	26.85	27.48	27.36	27.99	28.47	26.48	27.11	26.99	27.62	28.10
	8H	27.16	27.72	27.67	28.21	28.77	26.78	27.34	27.29	27.83	28.39