

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: P242263

Luminaire Tested: S122DRP-S1005D835-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242263  
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-S1005D835-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: -

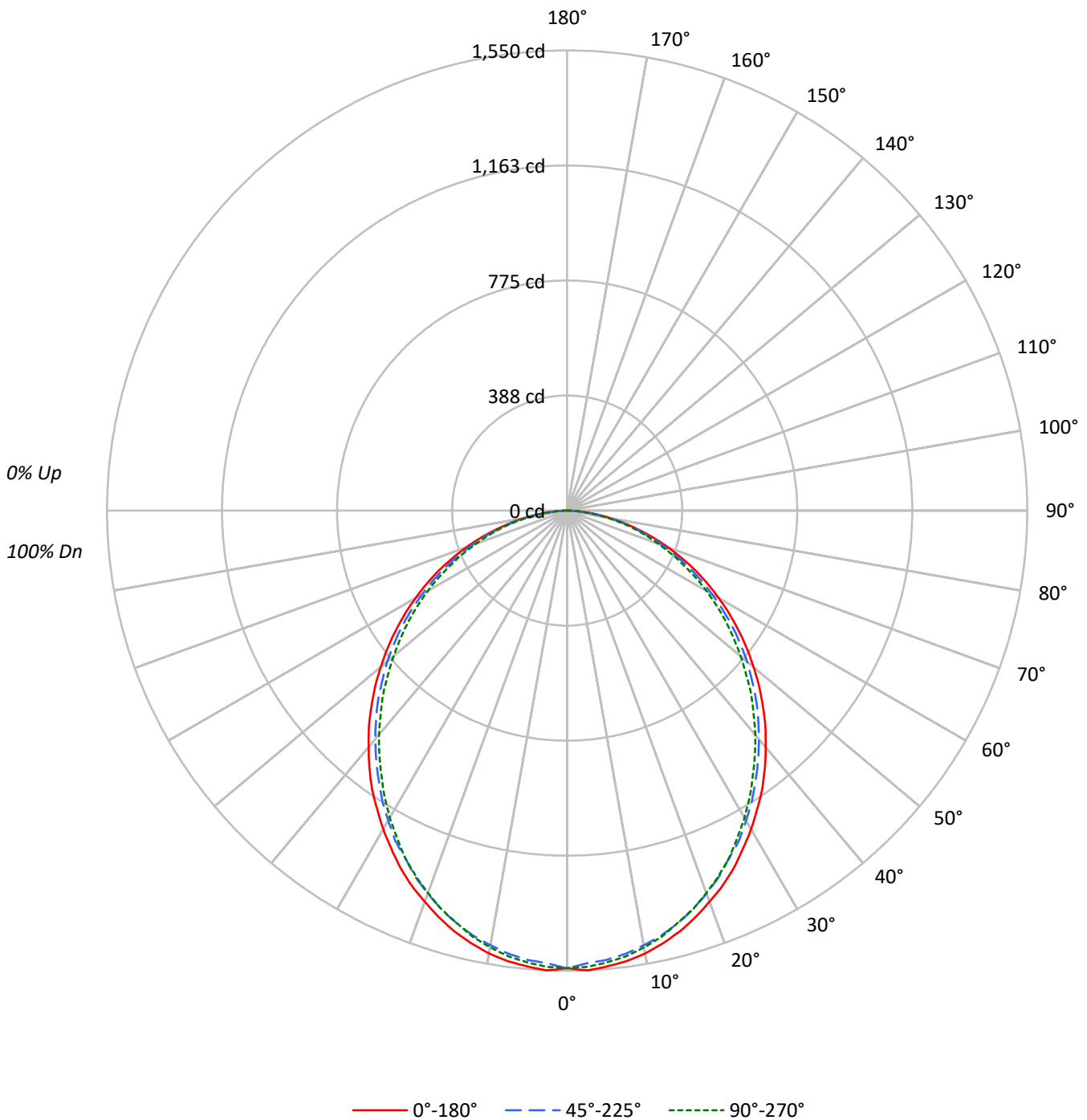
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3921.5 lumens  
Efficiency: N/A  
Efficacy: 95.4 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): 41.1  
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

TEST NUMBER: P242263

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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	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°	29360	29360	29360
5°	29472	29046	29216
10°	29297	28751	28894
15°	28935	28379	28349
20°	28419	27819	27788
25°	27908	27131	27131
30°	27251	26501	26275
35°	26639	25743	25364
40°	25870	24984	24507
45°	25111	24233	23635
50°	24287	23452	22619
55°	23429	22542	21705
60°	22472	21455	20663
65°	21440	20372	19439
70°	20138	19069	18161
75°	18325	17560	17125
80°	16256	15774	14962
85°	13288	12632	11343

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 25111 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	145.1	3.7
10°-20°	408.2	10.4
20°-30°	599.8	15.3
30°-40°	696.7	17.8
40°-50°	695.8	17.7
50°-60°	606.7	15.5
60°-70°	448.5	11.4
70°-80°	253.8	6.5
80°-90°	67.0	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°	1153.1	29.4
0°-40°	1849.7	47.2
0°-60°	3152.3	80.4
0°-90°	3921.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3921.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1541	1541	1541	1541	1541	
5°	1541	1535	1519	1531	1528	146
15°	1467	1458	1439	1445	1438	413
25°	1328	1316	1291	1294	1291	611
35°	1146	1131	1107	1098	1091	715
45°	932	922	900	883	877	719
55°	706	697	679	661	654	631
65°	476	467	452	439	431	470
75°	249	246	239	230	233	266
85°	61	59	58	53	52	71
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1541.4	1541.4	1541.4	1541.4	1541.4
2.5°	1550.3	1542.8	1526.5	1541.4	1538.4
5°	1541.4	1535.4	1519.1	1531.0	1528.0
7.5°	1531.0	1522.1	1505.8	1517.6	1514.7
10°	1514.7	1504.3	1486.5	1498.4	1493.9
12.5°	1492.5	1483.6	1465.8	1473.2	1470.2
15°	1467.3	1458.4	1439.1	1445.0	1437.6
17.5°	1436.1	1427.2	1408.0	1415.4	1408.0
20°	1402.0	1393.2	1372.4	1376.9	1370.9
22.5°	1368.0	1354.6	1335.4	1335.4	1332.4
25°	1327.9	1316.1	1290.9	1293.9	1290.9
27.5°	1283.5	1273.1	1253.8	1249.4	1242.0
30°	1239.0	1227.2	1204.9	1200.5	1194.6
32.5°	1191.6	1182.7	1159.0	1150.1	1144.2
35°	1145.6	1130.8	1107.1	1098.2	1090.8
37.5°	1093.8	1080.4	1056.7	1046.3	1038.9
40°	1040.4	1028.6	1004.8	991.5	985.6
42.5°	988.5	976.7	953.0	938.2	929.3
45°	932.2	921.9	899.6	883.3	877.4
47.5°	877.4	867.0	843.3	827.0	818.1
50°	819.6	812.2	791.4	770.7	763.3
52.5°	763.3	752.9	733.6	717.3	707.0
55°	705.5	696.6	678.8	661.0	653.6
57.5°	647.7	640.3	621.0	603.2	597.3
60°	589.9	583.9	563.2	546.9	542.4
62.5°	533.5	523.2	508.4	493.5	487.6
65°	475.7	466.9	452.0	438.7	431.3
67.5°	416.5	409.1	395.7	385.3	379.4
70°	361.6	355.7	342.4	332.0	326.1
72.5°	305.3	299.4	292.0	281.6	277.1
75°	249.0	246.0	238.6	229.7	232.7
77.5°	198.6	192.7	189.7	185.3	180.8
80°	148.2	146.7	143.8	139.3	136.4
82.5°	100.8	100.8	99.3	93.4	93.4
85°	60.8	59.3	57.8	53.4	51.9
87.5°	26.7	23.7	20.7	16.3	14.8
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	23.02	24.64	23.39	24.95	25.26	22.58	24.19	22.95	24.51	24.82
	3H	24.77	26.23	25.15	26.56	26.92	24.28	25.74	24.66	26.06	26.42
	4H	25.42	26.79	25.82	27.14	27.51	24.93	26.29	25.32	26.64	27.02
	6H	25.89	27.16	26.30	27.52	27.91	25.39	26.66	25.80	27.02	27.41
	8H	26.03	27.24	26.46	27.63	28.03	25.53	26.74	25.95	27.13	27.53
	12H	26.12	27.28	26.55	27.67	28.09	25.61	26.77	26.04	27.15	27.58
4H	2H	23.58	24.95	23.98	25.30	25.68	23.23	24.60	23.63	24.95	25.32
	3H	25.56	26.71	25.97	27.10	27.50	25.15	26.30	25.56	26.70	27.10
	4H	26.34	27.37	26.77	27.79	28.22	25.91	26.95	26.34	27.36	27.80
	6H	26.93	27.84	27.39	28.28	28.73	26.50	27.41	26.95	27.85	28.30
	8H	27.12	27.97	27.58	28.41	28.88	26.68	27.53	27.15	27.97	28.44
	12H	27.25	28.01	27.73	28.49	28.96	26.80	27.56	27.28	28.04	28.51
8H	4H	26.61	27.46	27.07	27.90	28.36	26.24	27.08	26.70	27.52	27.99
	6H	27.32	28.03	27.82	28.52	28.99	26.94	27.65	27.44	28.13	28.61
	8H	27.58	28.21	28.09	28.72	29.21	27.19	27.82	27.70	28.33	28.82
	12H	27.78	28.34	28.29	28.83	29.39	27.37	27.93	27.88	28.42	28.98
12H	4H	26.64	27.40	27.12	27.87	28.34	26.27	27.03	26.75	27.51	27.98
	6H	27.37	28.00	27.88	28.51	28.99	27.00	27.63	27.51	28.14	28.63
	8H	27.68	28.24	28.19	28.73	29.29	27.31	27.86	27.81	28.35	28.92