

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: P243123

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P243123  
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-H1005D835-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: -

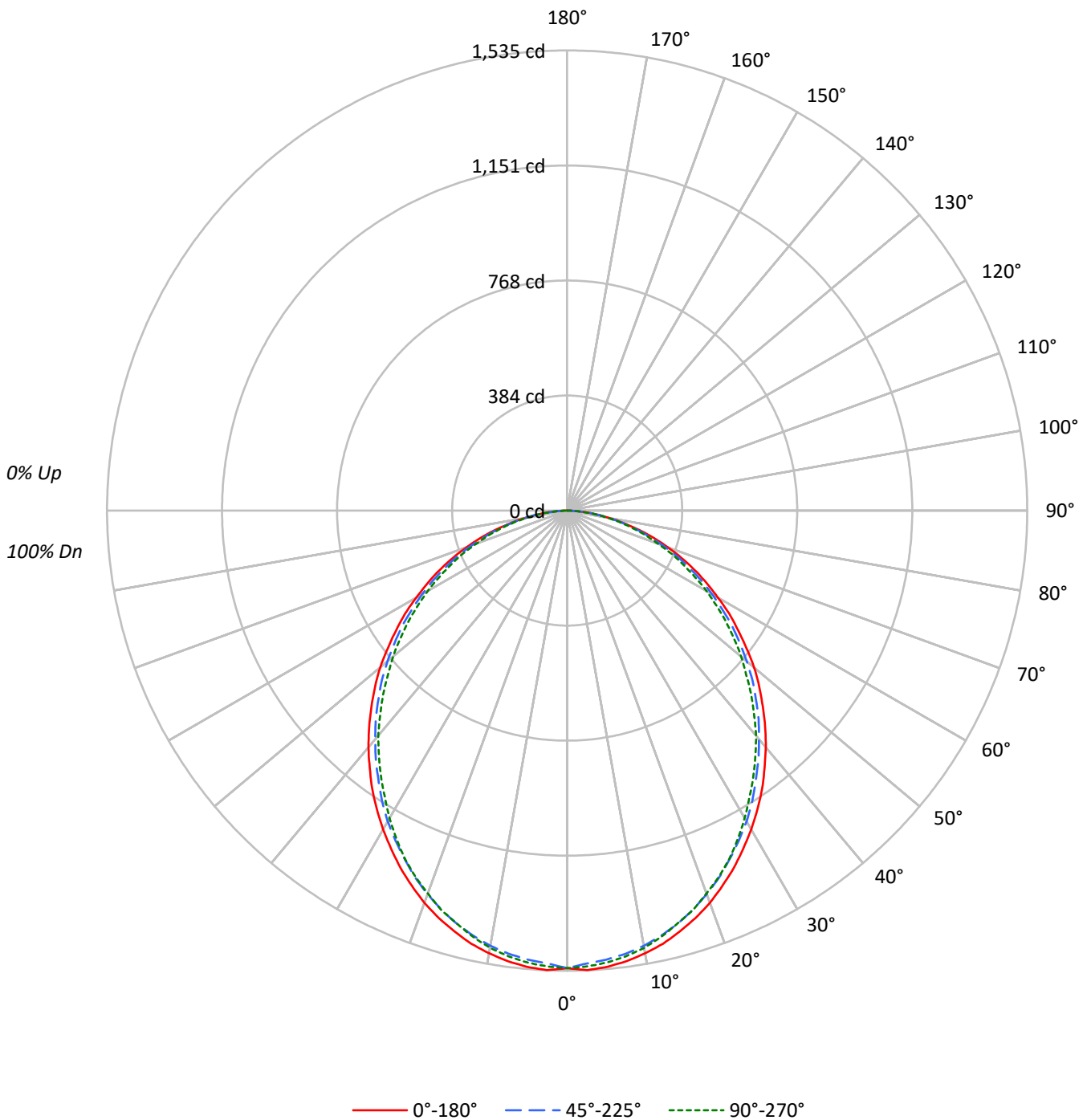
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3883.5 lumens  
Efficiency: N/A  
Efficacy: 103.0 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): 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	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	28	38	32	27	37	32	27	26

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	29071	29071	29071
5°	29208	28751	28939
10°	29003	28511	28649
15°	28653	28126	28099
20°	28228	27600	27543
25°	27641	26960	26931
30°	27009	26327	26050
35°	26362	25513	25185
40°	25638	24763	24378
45°	24855	23985	23379
50°	24133	23176	22468
55°	23123	22330	21486
60°	22130	21272	20469
65°	21174	20160	19272
70°	19899	18880	17938
75°	18119	17390	16566
80°	15741	15280	14655
85°	13528	11998	11059

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 24855 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	143.7	3.7
10°-20°	404.5	10.4
20°-30°	594.7	15.3
30°-40°	690.5	17.8
40°-50°	689.6	17.8
50°-60°	600.6	15.5
60°-70°	444.2	11.4
70°-80°	250.4	6.4
80°-90°	65.3	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°	1142.9	29.4
0°-40°	1833.4	47.2
0°-60°	3123.6	80.4
0°-90°	3883.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3883.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1526	1526	1526	1526	1526	
5°	1528	1521	1504	1516	1514	145
15°	1453	1446	1426	1432	1425	410
25°	1315	1304	1283	1281	1281	605
35°	1134	1121	1097	1087	1083	708
45°	923	913	890	876	868	713
55°	696	691	672	654	647	624
65°	470	463	447	433	428	464
75°	246	245	236	228	225	262
85°	62	59	55	52	51	70
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1526.2	1526.2	1526.2	1526.2	1526.2
2.5°	1534.6	1527.6	1512.1	1524.8	1522.0
5°	1527.6	1520.6	1503.7	1516.3	1513.5
7.5°	1516.3	1509.3	1491.0	1503.7	1499.5
10°	1499.5	1491.0	1474.1	1482.6	1481.2
12.5°	1479.8	1471.3	1451.6	1458.7	1455.8
15°	1453.0	1446.0	1426.3	1431.9	1424.9
17.5°	1424.9	1413.7	1395.4	1401.0	1396.8
20°	1392.6	1381.3	1361.6	1364.4	1358.8
22.5°	1354.6	1343.3	1325.0	1325.0	1322.2
25°	1315.2	1303.9	1282.8	1281.4	1281.4
27.5°	1271.6	1261.7	1240.6	1236.4	1233.6
30°	1228.0	1219.5	1197.0	1188.6	1184.4
32.5°	1181.6	1170.3	1149.2	1139.4	1132.3
35°	1133.7	1121.1	1097.2	1087.3	1083.1
37.5°	1081.7	1069.0	1047.9	1039.5	1031.1
40°	1031.1	1019.8	995.9	983.2	980.4
42.5°	977.6	966.3	945.2	931.2	922.7
45°	922.7	912.9	890.4	876.3	867.9
47.5°	869.3	858.0	838.3	821.5	810.2
50°	814.4	803.2	782.1	762.4	758.2
52.5°	753.9	746.9	725.8	707.5	701.9
55°	696.3	690.6	672.4	654.1	647.0
57.5°	641.4	634.4	613.3	599.2	590.8
60°	580.9	576.7	558.4	543.0	537.3
62.5°	524.7	519.0	503.6	488.1	481.1
65°	469.8	462.8	447.3	433.2	427.6
67.5°	413.5	406.5	393.9	382.6	377.0
70°	357.3	351.7	339.0	329.1	322.1
72.5°	302.4	296.8	285.5	275.7	274.3
75°	246.2	244.8	236.3	227.9	225.1
77.5°	194.1	192.7	187.1	182.9	180.0
80°	143.5	143.5	139.3	135.0	133.6
82.5°	98.5	99.9	95.7	92.8	92.8
85°	61.9	59.1	54.9	52.0	50.6
87.5°	25.3	21.1	19.7	15.5	14.1
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	22.99	24.60	23.36	24.92	25.23	22.56	24.17	22.93	24.49	24.80
	3H	24.75	26.20	25.12	26.53	26.89	24.26	25.72	24.64	26.04	26.41
	4H	25.39	26.76	25.79	27.11	27.48	24.89	26.26	25.29	26.61	26.98
	6H	25.85	27.12	26.26	27.48	27.87	25.35	26.62	25.76	26.98	27.37
	8H	25.99	27.20	26.41	27.59	27.99	25.49	26.70	25.92	27.09	27.49
	12H	26.08	27.24	26.51	27.62	28.05	25.57	26.73	26.00	27.11	27.54
4H	2H	23.55	24.92	23.95	25.27	25.64	23.21	24.58	23.61	24.93	25.30
	3H	25.53	26.67	25.94	27.07	27.47	25.13	26.27	25.54	26.67	27.07
	4H	26.31	27.34	26.74	27.76	28.19	25.87	26.91	26.31	27.32	27.76
	6H	26.89	27.80	27.35	28.24	28.69	26.46	27.36	26.91	27.80	28.26
	8H	27.08	27.92	27.54	28.37	28.83	26.64	27.49	27.10	27.93	28.39
	12H	27.21	27.97	27.69	28.45	28.92	26.76	27.52	27.24	27.99	28.46
8H	4H	26.58	27.42	27.04	27.87	28.33	26.20	27.04	26.66	27.48	27.95
	6H	27.28	27.98	27.77	28.47	28.95	26.89	27.59	27.39	28.08	28.56
	8H	27.53	28.16	28.04	28.67	29.16	27.14	27.77	27.65	28.28	28.76
	12H	27.74	28.30	28.25	28.79	29.35	27.32	27.87	27.82	28.37	28.93
12H	4H	26.60	27.36	27.08	27.84	28.31	26.23	26.99	26.71	27.47	27.93
	6H	27.32	27.95	27.83	28.46	28.95	26.95	27.58	27.46	28.09	28.57
	8H	27.63	28.19	28.14	28.68	29.24	27.25	27.81	27.76	28.30	28.86