

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: P242537

Luminaire Tested: S123RDRP-S1000D835-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242537  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-25)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDRP-S1000D835-X4F0-XX-UDD-F-W  
Description: DEFINE 3 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

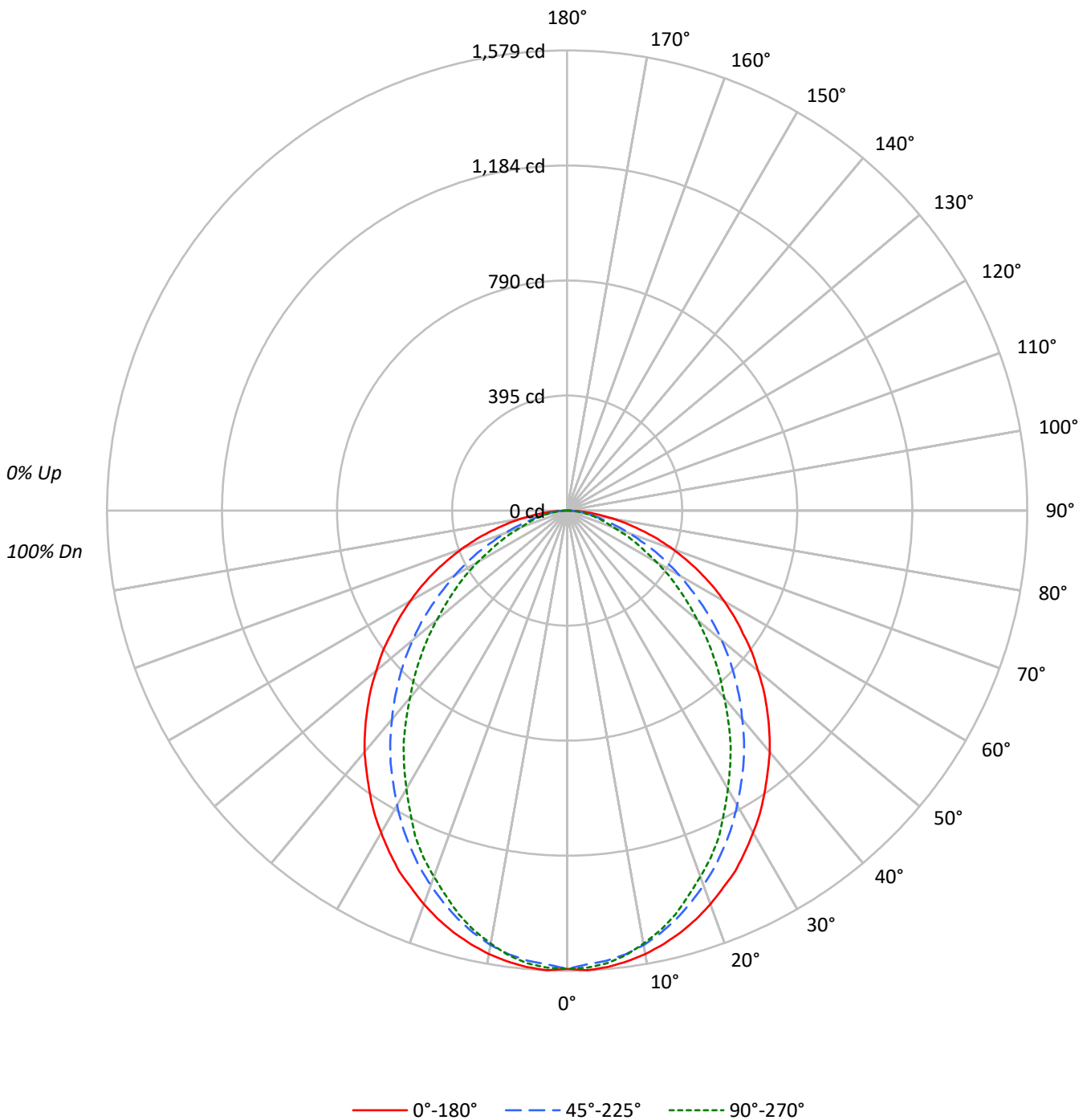
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3552.3 lumens  
Efficiency: N/A  
Efficacy: 102.1 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.07 / 1.22  
Luminous Opening: Rectangular (W 0.23' 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	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	110	105	101	98	107	103	99	96	99	96	93	95	93	90	91	89	88	86					86			
2	100	93	86	81	98	91	85	80	87	83	78	84	80	77	81	78	75	73					73			
3	92	82	75	68	90	81	74	68	78	72	67	75	70	66	73	68	64	62					62			
4	85	73	65	59	83	72	64	58	70	63	58	67	62	57	65	60	56	54					54			
5	78	66	57	51	76	65	57	51	63	56	50	61	55	50	59	54	49	47					47			
6	73	60	51	45	71	59	51	45	57	50	45	55	49	44	54	48	44	42					42			
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39	37					37			
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34					34			
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30					30			
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	34	29	28					28			

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

	0°	45°	90°
0°	19059	19059	19059
5°	19132	18868	18976
10°	19024	18631	18568
15°	18819	18196	18004
20°	18539	17650	17240
25°	18249	17039	16493
30°	17866	16332	15439
35°	17474	15624	14473
40°	17111	14791	13277
45°	16636	13969	12198
50°	16112	13034	10990
55°	15577	11965	9863
60°	15086	10819	8625
65°	14447	9582	7388
70°	13648	8045	5965
75°	12481	6332	5615
80°	11127	5605	5165
85°	9402	4965	4617

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 16636 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	147.8	4.2
10°-20°	411.2	11.6
20°-30°	592.0	16.7
30°-40°	666.7	18.8
40°-50°	637.8	18.0
50°-60°	522.1	14.7
60°-70°	352.0	9.9
70°-80°	176.5	5.0
80°-90°	46.2	1.3
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°	1151.1	32.4
0°-40°	1817.8	51.2
0°-60°	2977.6	83.8
0°-90°	3552.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3552.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1572	1572	1572	1572	1572	
5°	1572	1566	1551	1562	1560	149
15°	1500	1486	1450	1444	1435	423
25°	1364	1333	1274	1247	1233	628
35°	1181	1135	1056	1001	978	739
45°	970	913	815	742	712	749
55°	737	675	566	492	467	661
65°	504	434	334	272	258	499
75°	266	205	135	122	120	284
85°	68	40	36	33	33	78
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1572.4	1572.4	1572.4	1572.4	1572.4
2.5°	1578.8	1573.7	1558.4	1572.4	1569.8
5°	1572.4	1566.0	1550.7	1562.2	1559.6
7.5°	1560.9	1554.5	1535.4	1543.1	1539.2
10°	1545.6	1536.7	1513.7	1515.0	1508.6
12.5°	1523.9	1513.7	1484.4	1483.1	1475.5
15°	1499.7	1485.7	1450.0	1443.6	1434.7
17.5°	1470.4	1455.1	1410.4	1397.7	1384.9
20°	1437.2	1416.8	1368.3	1351.8	1336.5
22.5°	1400.2	1376.0	1323.7	1302.0	1288.0
25°	1364.5	1332.6	1274.0	1247.2	1233.2
27.5°	1321.2	1286.7	1223.0	1187.3	1165.6
30°	1276.5	1238.3	1166.9	1123.5	1103.1
32.5°	1231.9	1187.3	1110.7	1062.3	1040.6
35°	1180.9	1135.0	1055.9	1001.1	978.1
37.5°	1129.9	1080.1	997.2	936.0	908.0
40°	1081.4	1025.3	934.8	868.4	839.1
42.5°	1026.6	970.5	876.1	802.1	776.6
45°	970.5	913.1	814.9	742.2	711.6
47.5°	915.6	851.9	754.9	675.9	649.1
50°	854.4	794.5	691.2	612.1	582.8
52.5°	799.6	733.3	631.2	548.4	522.9
55°	737.1	674.6	566.2	492.2	466.7
57.5°	681.0	613.4	503.7	433.6	411.9
60°	622.3	552.2	446.3	377.5	355.8
62.5°	563.7	493.5	387.7	323.9	301.0
65°	503.7	433.6	334.1	271.6	257.6
67.5°	443.8	372.4	275.5	228.3	213.0
70°	385.1	316.3	227.0	182.4	168.3
72.5°	326.5	258.9	179.8	145.4	141.6
75°	266.5	205.3	135.2	122.4	119.9
77.5°	211.7	155.6	105.8	98.2	95.6
80°	159.4	107.1	80.3	76.5	74.0
82.5°	109.7	66.3	57.4	53.6	53.6
85°	67.6	39.5	35.7	33.2	33.2
87.5°	30.6	16.6	16.6	15.3	14.0
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	21.69	23.24	22.05	23.56	23.87	19.06	20.62	19.43	20.93	21.24
	3H	23.47	24.86	23.84	25.19	25.55	20.17	21.57	20.55	21.90	22.26
	4H	24.13	25.44	24.53	25.79	26.16	20.57	21.88	20.97	22.23	22.61
	6H	24.61	25.82	25.02	26.19	26.58	20.89	22.10	21.30	22.46	22.86
	8H	24.76	25.91	25.18	26.30	26.70	21.00	22.15	21.42	22.54	22.94
	12H	24.86	25.97	25.29	26.35	26.78	21.07	22.18	21.50	22.56	22.99
4H	2H	21.95	23.26	22.35	23.61	23.99	19.77	21.09	20.17	21.43	21.81
	3H	23.91	25.00	24.32	25.40	25.80	21.05	22.14	21.46	22.54	22.94
	4H	24.68	25.66	25.11	26.08	26.52	21.53	22.51	21.96	22.93	23.37
	6H	25.28	26.13	25.73	26.57	27.03	21.95	22.80	22.40	23.25	23.71
	8H	25.47	26.27	25.93	26.71	27.18	22.09	22.89	22.56	23.34	23.81
	12H	25.62	26.33	26.10	26.81	27.28	22.21	22.92	22.69	23.40	23.87
8H	4H	24.74	25.54	25.20	25.98	26.45	21.85	22.65	22.31	23.10	23.56
	6H	25.40	26.06	25.89	26.55	27.03	22.36	23.03	22.86	23.52	23.99
	8H	25.63	26.23	26.14	26.73	27.22	22.57	23.16	23.08	23.67	24.16
	12H	25.83	26.36	26.34	26.85	27.41	22.74	23.27	23.25	23.76	24.32
12H	4H	24.73	25.44	25.21	25.92	26.39	21.90	22.61	22.38	23.09	23.56
	6H	25.38	25.98	25.90	26.49	26.98	22.43	23.02	22.94	23.53	24.02
	8H	25.66	26.18	26.16	26.67	27.24	22.68	23.21	23.19	23.70	24.26