

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P242542

Luminaire Tested: **S123RDR-S1000D840-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242542  
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 (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123RDR-S1000D840-X4F0-XX-UDD-F-W  
Description: DEFINE 3 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3587.3 lumens  
Efficiency: N/A  
Efficacy: 103.1 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

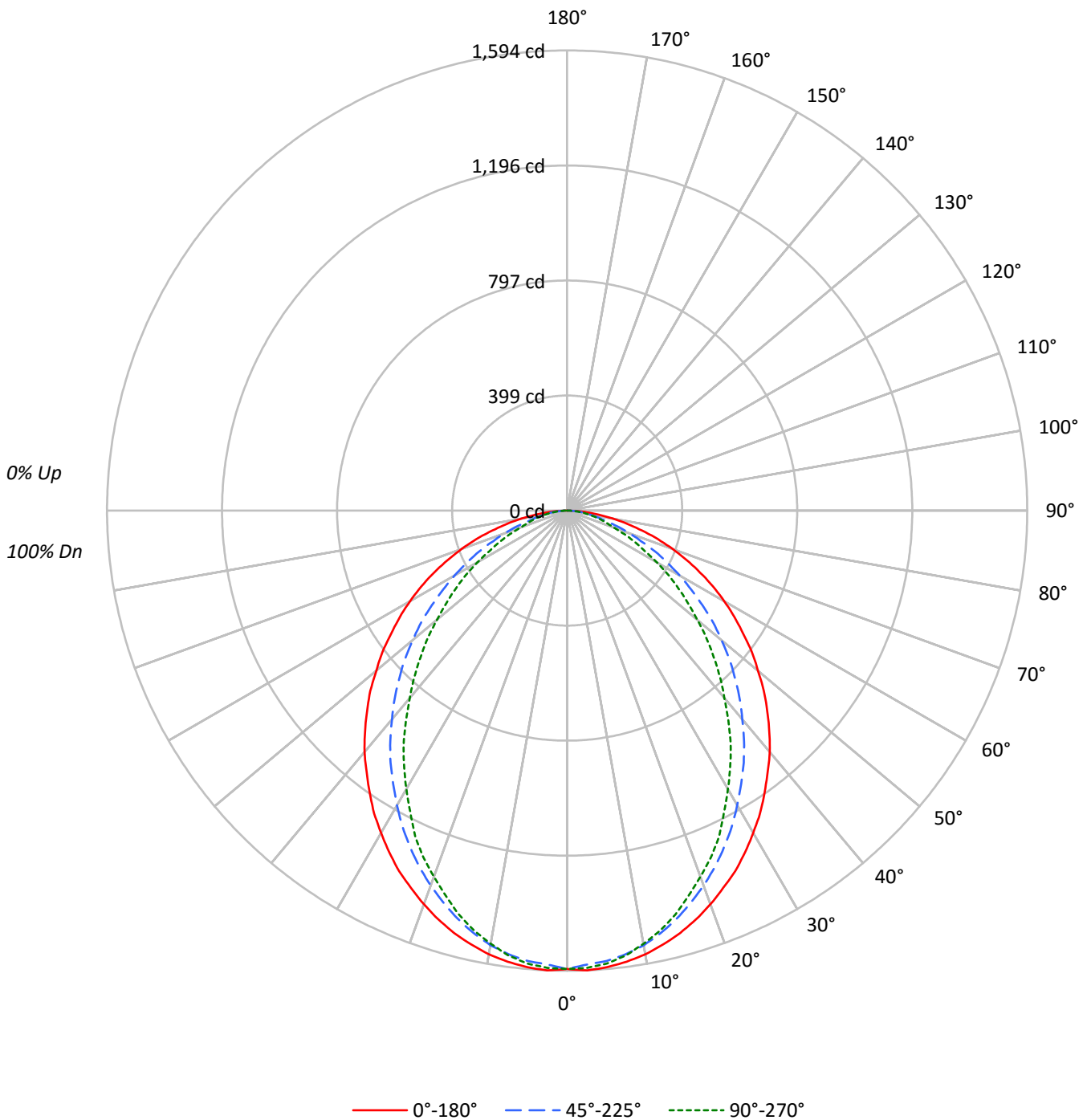
Input Watts (W): 34.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	19247	19247	19247
5°	19321	19054	19164
10°	19211	18816	18752
15°	19005	18375	18181
20°	18722	17824	17409
25°	18430	17206	16655
30°	18043	16493	15592
35°	17646	15778	14617
40°	17280	14937	13409
45°	16799	14106	12318
50°	16270	13162	11098
55°	15731	12084	9960
60°	15236	10926	8710
65°	14590	9677	7460
70°	13783	8123	6025
75°	12607	6393	5671
80°	11238	5661	5214
85°	9499	5021	4659



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	149.3	4.2
10°-20°	415.3	11.6
20°-30°	597.9	16.7
30°-40°	673.3	18.8
40°-50°	644.0	18.0
50°-60°	527.2	14.7
60°-70°	355.5	9.9
70°-80°	178.3	5.0
80°-90°	46.6	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°	1162.4	32.4
0°-40°	1835.7	51.2
0°-60°	3007.0	83.8
0°-90°	3587.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3587.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1588	1588	1588	1588	1588	
5°	1588	1582	1566	1578	1575	151
15°	1514	1500	1464	1458	1449	427
25°	1378	1346	1286	1260	1245	634
35°	1192	1146	1066	1011	988	746
45°	980	922	823	750	719	756
55°	744	681	572	497	471	668
65°	509	438	337	274	260	503
75°	269	207	136	124	121	287
85°	68	40	36	34	34	79
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1587.9	1587.9	1587.9	1587.9	1587.9
2.5°	1594.3	1589.2	1573.7	1587.9	1585.3
5°	1587.9	1581.5	1566.0	1577.6	1575.0
7.5°	1576.3	1569.9	1550.5	1558.3	1554.4
10°	1560.8	1551.8	1528.7	1529.9	1523.5
12.5°	1539.0	1528.7	1499.0	1497.7	1490.0
15°	1514.5	1500.3	1464.3	1457.8	1448.8
17.5°	1484.9	1469.4	1424.3	1411.5	1398.6
20°	1451.4	1430.8	1381.8	1365.1	1349.6
22.5°	1414.0	1389.6	1336.8	1314.9	1300.7
25°	1378.0	1345.8	1286.5	1259.5	1245.3
27.5°	1334.2	1299.4	1235.0	1199.0	1177.1
30°	1289.1	1250.5	1178.4	1134.6	1114.0
32.5°	1244.0	1199.0	1121.7	1072.8	1050.9
35°	1192.5	1146.2	1066.3	1010.9	987.8
37.5°	1141.0	1090.8	1007.1	945.3	916.9
40°	1092.1	1035.4	944.0	877.0	847.4
42.5°	1036.7	980.0	884.7	810.0	784.3
45°	980.0	922.1	822.9	749.5	718.6
47.5°	924.7	860.3	762.4	682.5	655.5
50°	862.8	802.3	698.0	618.2	588.5
52.5°	807.5	740.5	637.5	553.8	528.0
55°	744.4	681.3	571.8	497.1	471.3
57.5°	687.7	619.4	508.7	437.9	416.0
60°	628.5	557.6	450.7	381.2	359.3
62.5°	569.2	498.4	391.5	327.1	303.9
65°	508.7	437.9	337.4	274.3	260.1
67.5°	448.2	376.0	278.2	230.5	215.1
70°	388.9	319.4	229.2	184.2	170.0
72.5°	329.7	261.4	181.6	146.8	142.9
75°	269.2	207.3	136.5	123.6	121.1
77.5°	213.8	157.1	106.9	99.2	96.6
80°	161.0	108.2	81.1	77.3	74.7
82.5°	110.8	67.0	58.0	54.1	54.1
85°	68.3	39.9	36.1	33.5	33.5
87.5°	30.9	16.7	16.7	15.5	14.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)