

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: P242534

Luminaire Tested: **S123RDR-S1165D830-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242534  
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-S1165D830-X4F0-XX-UDD-F-W  
Description: DEFINE 3 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3891.2 lumens  
Efficiency: N/A  
Efficacy: 94.7 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

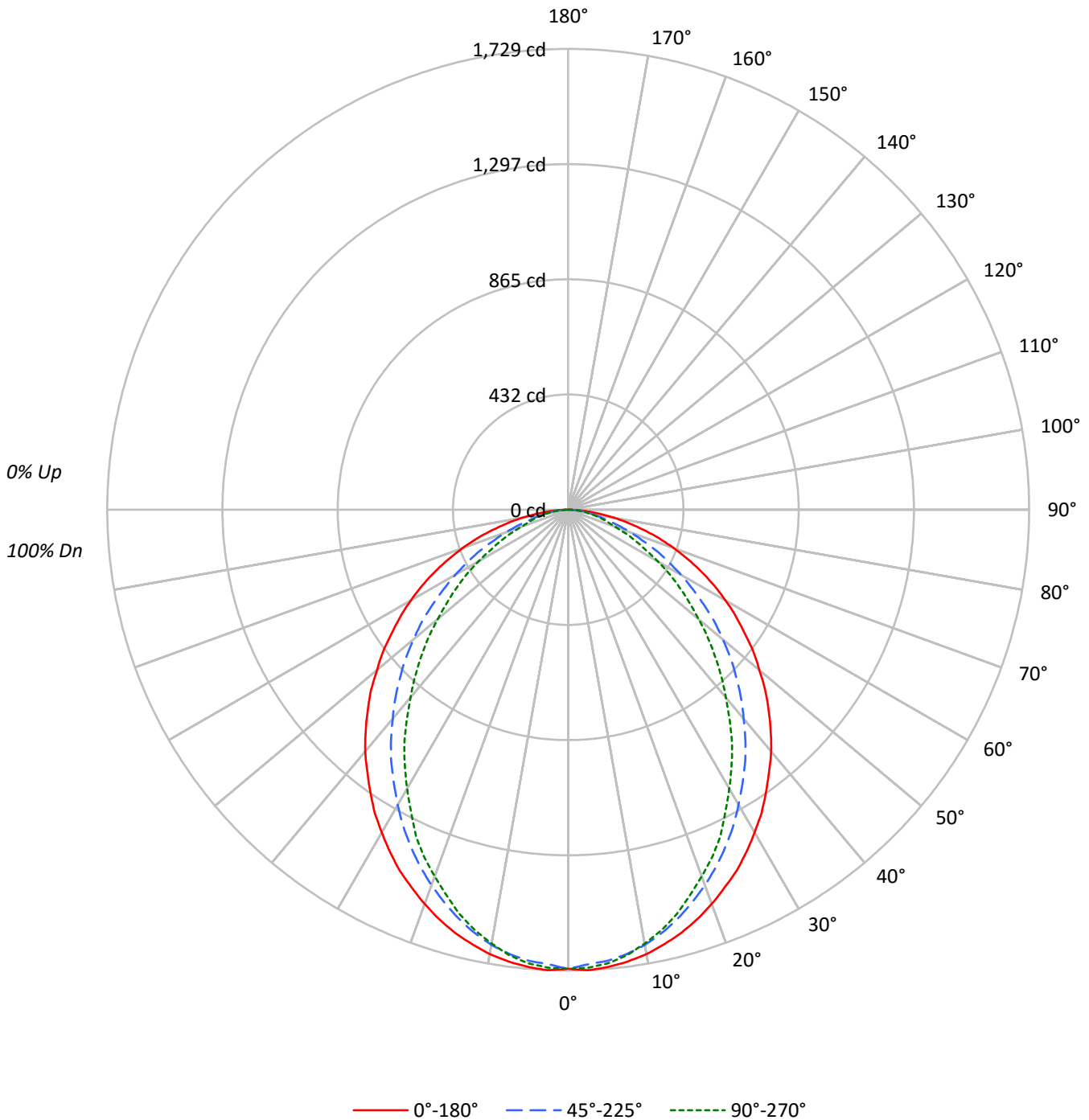
Input Watts (W): 41.1  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	20878	20878	20878
5°	20957	20669	20787
10°	20839	20408	20341
15°	20615	19931	19720
20°	20307	19335	18884
25°	19991	18664	18066
30°	19571	17890	16912
35°	19142	17116	15854
40°	18744	16201	14545
45°	18224	15301	13362
50°	17649	14277	12038
55°	17063	13107	10805
60°	16526	11852	9447
65°	15826	10497	8094
70°	14952	8814	6535
75°	13675	6936	6149
80°	12188	6143	5654
85°	10292	5438	5048



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	161.9	4.2
10°-20°	450.4	11.6
20°-30°	648.5	16.7
30°-40°	730.3	18.8
40°-50°	698.6	18.0
50°-60°	571.9	14.7
60°-70°	385.6	9.9
70°-80°	193.4	5.0
80°-90°	50.6	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°	1260.9	32.4
0°-40°	1991.2	51.2
0°-60°	3261.7	83.8
0°-90°	3891.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3891.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1722	1722	1722	1722	1722	
5°	1722	1715	1699	1711	1708	163
15°	1643	1627	1588	1581	1572	463
25°	1495	1460	1396	1366	1351	688
35°	1294	1243	1157	1097	1071	810
45°	1063	1000	893	813	780	820
55°	807	739	620	539	511	724
65°	552	475	366	298	282	546
75°	292	225	148	134	131	311
85°	74	43	39	36	36	86
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1722.4	1722.4	1722.4	1722.4	1722.4
2.5°	1729.4	1723.8	1707.0	1722.4	1719.6
5°	1722.4	1715.4	1698.7	1711.2	1708.4
7.5°	1709.8	1702.8	1681.9	1690.3	1686.1
10°	1693.1	1683.3	1658.1	1659.5	1652.6
12.5°	1669.3	1658.1	1626.0	1624.6	1616.2
15°	1642.8	1627.4	1588.3	1581.3	1571.5
17.5°	1610.7	1593.9	1545.0	1531.0	1517.1
20°	1574.3	1552.0	1498.9	1480.7	1464.0
22.5°	1533.8	1507.3	1450.0	1426.3	1410.9
25°	1494.7	1459.8	1395.5	1366.2	1350.8
27.5°	1447.2	1409.5	1339.6	1300.5	1276.8
30°	1398.3	1356.4	1278.2	1230.7	1208.3
32.5°	1349.4	1300.5	1216.7	1163.6	1139.9
35°	1293.6	1243.3	1156.7	1096.6	1071.4
37.5°	1237.7	1183.2	1092.4	1025.3	994.6
40°	1184.6	1123.1	1023.9	951.3	919.2
42.5°	1124.5	1063.1	959.7	878.7	850.7
45°	1063.1	1000.2	892.6	813.0	779.5
47.5°	1003.0	933.1	827.0	740.4	711.0
50°	935.9	870.3	757.1	670.5	638.4
52.5°	875.9	803.2	691.5	600.7	572.7
55°	807.4	739.0	620.2	539.2	511.3
57.5°	746.0	671.9	551.8	475.0	451.2
60°	681.7	604.9	488.9	413.5	389.7
62.5°	617.4	540.6	424.7	354.8	329.7
65°	551.8	475.0	366.0	297.5	282.2
67.5°	486.1	407.9	301.7	250.0	233.3
70°	421.9	346.4	248.7	199.8	184.4
72.5°	357.6	283.6	197.0	159.2	155.1
75°	292.0	224.9	148.1	134.1	131.3
77.5°	231.9	170.4	115.9	107.6	104.8
80°	174.6	117.3	88.0	83.8	81.0
82.5°	120.1	72.6	62.9	58.7	58.7
85°	74.0	43.3	39.1	36.3	36.3
87.5°	33.5	18.2	18.2	16.8	15.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)