

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: P243466

Luminaire Tested: **S124DR-H1020D835-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P243466  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-84)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DR-H1020D835-X4F0-XX-UDD-F-W  
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4080.2 lumens  
Efficiency: N/A  
Efficacy: 129.5 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3  
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')  
CIE Type: Direct

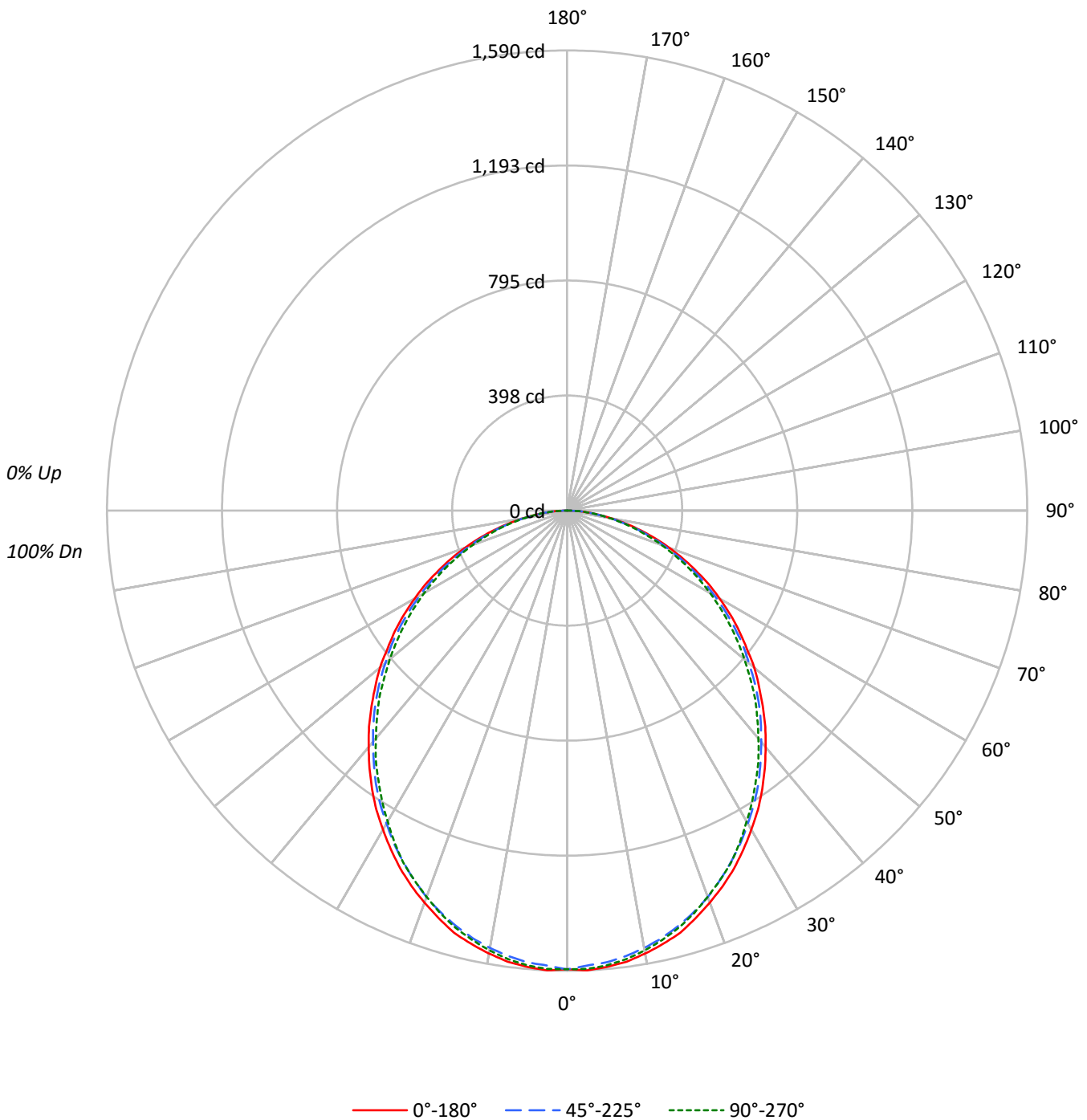
Input Watts (W): 31.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51
5	77	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	47	44
6	71	58	49	42	69	57	48	42	55	47	42	53	46	41	52	46	41	39
7	66	52	44	38	64	51	43	37	50	43	37	48	42	37	47	41	37	35
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	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	52	40	33	27	39	32	27	38	32	27	37	31	27	25

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

	0°	45°	90°
0°	14089	14089	14089
5°	14120	13981	14073
10°	14026	13852	13933
15°	13898	13672	13731
20°	13639	13444	13431
25°	13382	13142	13154
30°	13065	12814	12734
35°	12749	12496	12343
40°	12375	12106	11926
45°	12013	11770	11543
50°	11681	11342	11057
55°	11253	10952	10613
60°	10821	10455	10133
65°	10308	9955	9629
70°	9754	9317	9016
75°	8991	8638	8370
80°	7924	7791	7591
85°	6976	6976	6843



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	149.4	3.7
10°-20°	421.3	10.3
20°-30°	620.5	15.2
30°-40°	721.9	17.7
40°-50°	722.2	17.7
50°-60°	631.6	15.5
60°-70°	469.1	11.5
70°-80°	267.3	6.6
80°-90°	77.0	1.9
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°	1191.2	29.2
0°-40°	1913.1	46.9
0°-60°	3266.8	80.1
0°-90°	4080.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4080.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1585	1585	1585	1585	1585	
5°	1582	1580	1567	1578	1577	150
15°	1510	1502	1486	1495	1492	425
25°	1364	1358	1340	1344	1341	628
35°	1175	1164	1152	1141	1138	734
45°	956	952	936	922	918	738
55°	726	721	707	691	685	649
65°	490	486	473	463	458	486
75°	262	257	252	246	244	278
85°	68	67	68	66	67	78
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1585.0	1585.0	1585.0	1585.0	1585.0
2.5°	1590.1	1586.2	1573.3	1586.2	1585.0
5°	1582.4	1579.8	1566.9	1578.5	1577.2
7.5°	1572.1	1566.9	1552.7	1564.3	1563.0
10°	1554.0	1550.1	1534.7	1546.3	1543.7
12.5°	1533.4	1529.5	1512.7	1521.8	1519.2
15°	1510.2	1502.4	1485.7	1494.7	1492.1
17.5°	1476.6	1471.5	1454.7	1462.4	1458.6
20°	1441.8	1435.4	1421.2	1422.5	1419.9
22.5°	1404.4	1398.0	1381.2	1386.4	1381.2
25°	1364.4	1358.0	1339.9	1343.8	1341.2
27.5°	1319.3	1312.8	1296.1	1297.4	1292.2
30°	1272.9	1265.1	1248.4	1247.1	1240.6
32.5°	1226.4	1218.7	1201.9	1196.8	1190.3
35°	1174.9	1164.5	1151.6	1141.3	1137.5
37.5°	1122.0	1116.8	1097.5	1091.0	1085.9
40°	1066.5	1061.4	1043.3	1034.3	1027.8
42.5°	1013.6	1007.2	990.4	977.5	972.4
45°	955.6	951.7	936.3	922.1	918.2
47.5°	898.9	897.6	878.2	864.1	857.6
50°	844.7	837.0	820.2	807.3	799.6
52.5°	781.5	780.2	766.0	749.3	742.8
55°	726.1	720.9	706.7	691.2	684.8
57.5°	668.0	665.4	647.4	634.5	628.0
60°	608.7	603.5	588.1	576.5	570.0
62.5°	552.0	545.5	531.3	519.7	513.3
65°	490.1	486.2	473.3	463.0	457.8
67.5°	432.0	426.9	414.0	404.9	399.8
70°	375.3	367.5	358.5	350.8	346.9
72.5°	318.5	312.1	304.4	299.2	294.0
75°	261.8	256.6	251.5	246.3	243.7
77.5°	207.6	202.5	199.9	198.6	196.0
80°	154.8	152.2	152.2	150.9	148.3
82.5°	109.6	107.0	107.0	107.0	105.7
85°	68.4	67.1	68.4	65.8	67.1
87.5°	32.2	32.2	33.5	32.2	33.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)