

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: P243565

Luminaire Tested: **S124RDR-H1020D830-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P243565  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-65)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124RDR-H1020D830-X4F0-XX-UDD-F-W  
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3626.3 lumens  
Efficiency: N/A  
Efficacy: 115.1 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.1 / 1.25  
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')  
CIE Type: Direct

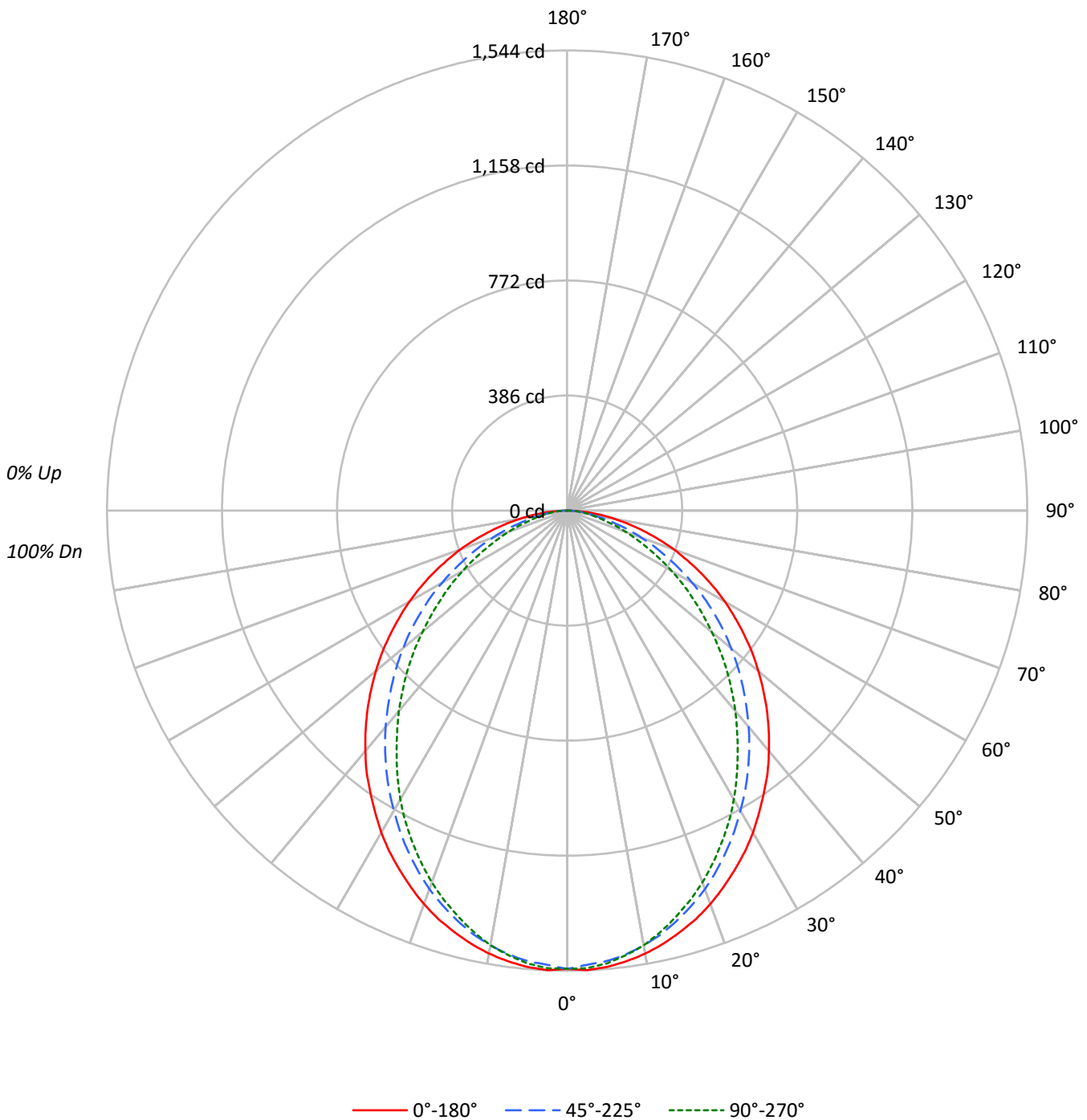
Input Watts (W): 31.5  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	105	101	97	107	103	99	96	98	95	93	95	92	90	91	89	87	85
2	100	92	86	80	97	90	84	79	87	82	78	84	79	76	81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	61
4	84	73	64	58	82	71	64	57	69	62	57	67	61	56	64	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	44	55	48	43	53	47	43	41
7	67	54	45	39	65	53	45	39	51	44	39	50	43	39	49	43	38	36
8	62	49	41	35	61	49	41	35	47	40	35	46	39	35	45	39	34	33
9	58	45	37	32	57	45	37	32	44	37	32	42	36	31	41	36	31	30
10	55	42	34	29	54	41	34	29	40	34	29	39	33	29	39	33	29	27

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

	0°	45°	90°
0°	13669	13669	13669
5°	13712	13540	13610
10°	13624	13368	13368
15°	13472	13107	12982
20°	13290	12786	12560
25°	13045	12377	12044
30°	12802	11929	11485
35°	12500	11491	10825
40°	12221	10997	10193
45°	11913	10471	9530
50°	11583	9935	8758
55°	11222	9322	7986
60°	10875	8615	7182
65°	10407	7782	6278
70°	9910	6872	5458
75°	9160	5729	4444
80°	8364	4474	4064
85°	7404	4284	4049



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	144.6	4.0
10°-20°	403.9	11.1
20°-30°	585.7	16.2
30°-40°	667.6	18.4
40°-50°	649.5	17.9
50°-60°	545.6	15.0
60°-70°	380.1	10.5
70°-80°	196.3	5.4
80°-90°	53.1	1.5
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°	1134.2	31.3
0°-40°	1801.7	49.7
0°-60°	2996.8	82.6
0°-90°	3626.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3626.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1538	1538	1538	1538	1538	
5°	1537	1532	1517	1529	1525	146
15°	1464	1453	1424	1422	1411	413
25°	1330	1305	1262	1244	1228	613
35°	1152	1117	1059	1019	998	721
45°	948	902	833	780	758	731
55°	724	678	602	540	515	648
65°	495	447	370	317	298	490
75°	267	226	167	140	129	284
85°	73	46	42	40	40	83
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1537.8	1537.8	1537.8	1537.8	1537.8
2.5°	1543.5	1538.9	1525.3	1537.8	1536.7
5°	1536.7	1532.1	1517.4	1528.7	1525.3
7.5°	1525.3	1519.6	1502.6	1510.6	1504.9
10°	1509.4	1503.8	1481.1	1486.7	1481.1
12.5°	1489.0	1481.1	1456.1	1457.2	1448.2
15°	1464.0	1452.7	1424.3	1422.0	1410.7
17.5°	1436.8	1422.0	1389.1	1383.5	1371.0
20°	1405.0	1386.9	1351.7	1339.2	1327.8
22.5°	1368.7	1347.1	1308.6	1293.8	1279.0
25°	1330.1	1305.2	1262.0	1243.9	1228.0
27.5°	1290.4	1260.9	1214.4	1191.7	1175.8
30°	1247.3	1213.2	1162.2	1136.0	1119.0
32.5°	1199.6	1165.6	1112.2	1080.4	1058.9
35°	1151.9	1116.8	1058.9	1019.2	997.6
37.5°	1105.4	1065.7	1003.3	962.4	937.4
40°	1053.2	1011.2	947.7	901.1	878.4
42.5°	1001.0	957.9	889.8	841.0	816.0
45°	947.7	902.3	833.0	779.7	758.1
47.5°	893.2	847.8	776.3	720.7	695.7
50°	837.6	792.2	718.4	657.1	633.3
52.5°	783.1	735.4	661.7	599.2	574.3
55°	724.1	677.5	601.5	540.2	515.3
57.5°	667.3	618.5	544.8	482.3	461.9
60°	611.7	562.9	484.6	424.5	404.0
62.5°	552.7	503.9	426.7	368.8	350.7
65°	494.8	447.2	370.0	316.6	298.5
67.5°	435.8	392.7	317.8	266.7	252.0
70°	381.3	332.5	264.4	220.2	210.0
72.5°	323.5	280.3	214.5	178.2	170.2
75°	266.7	225.8	166.8	139.6	129.4
77.5°	214.5	174.8	126.0	103.3	103.3
80°	163.4	128.2	87.4	81.7	79.4
82.5°	115.8	82.8	64.7	60.2	59.0
85°	72.6	46.5	42.0	39.7	39.7
87.5°	35.2	21.6	21.6	20.4	20.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)