

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: P242724

Luminaire Tested: **S124RDR-S1020D935-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242724  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-26)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124RDR-S1020D935-X4F0-XX-UDD-F-W  
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3313.4 lumens  
Efficiency: N/A  
Efficacy: 95.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')  
CIE Type: Direct

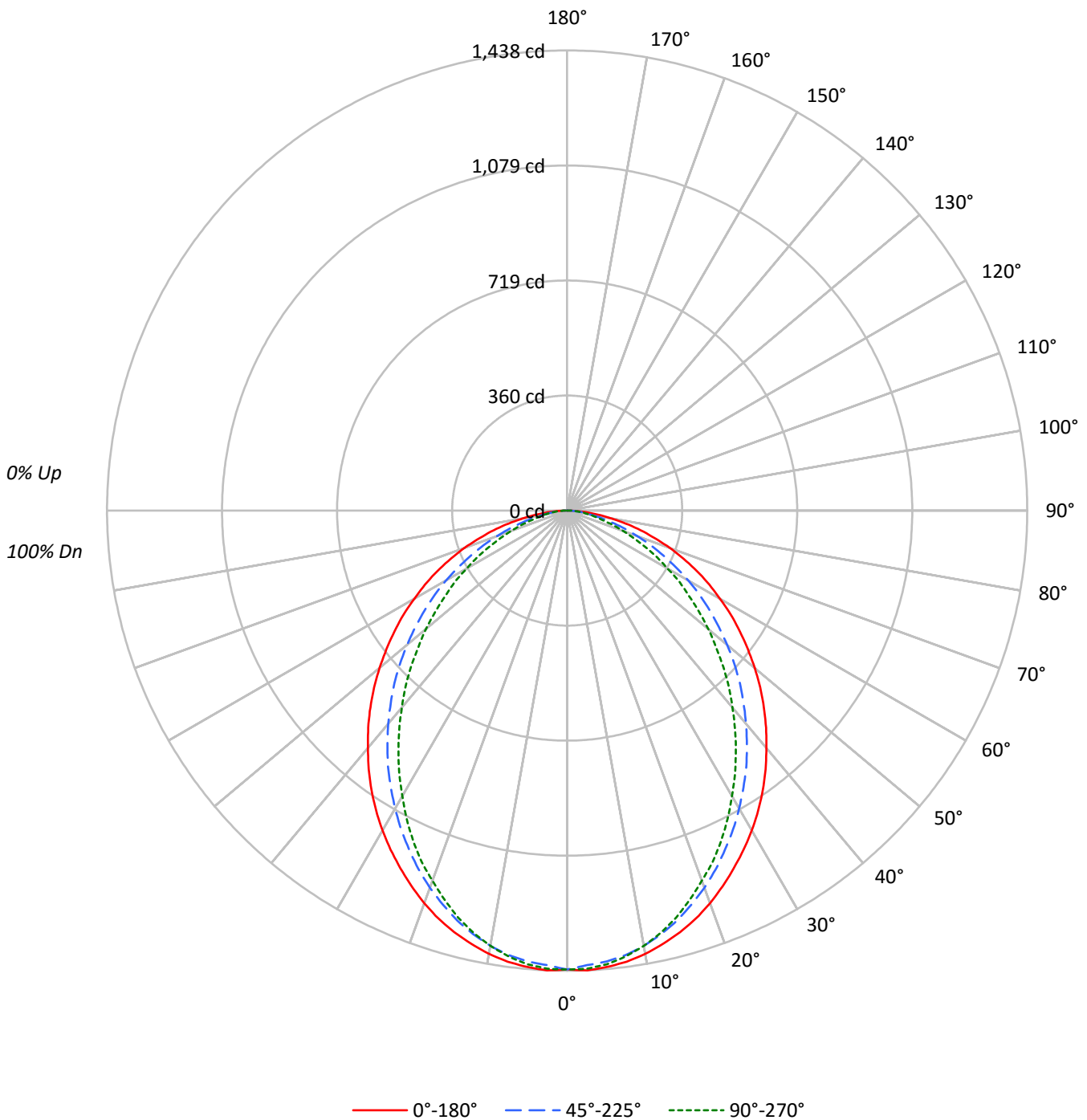
Input Watts (W): 34.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87	85
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	74	72
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	65	58	82	72	64	58	69	62	57	67	61	56	65	60	56	54
5	78	66	57	51	76	65	56	50	62	55	50	61	54	49	59	53	49	47
6	72	59	51	45	70	58	50	44	57	49	44	55	49	44	53	48	43	41
7	67	54	46	40	65	53	45	40	52	45	39	50	44	39	49	43	39	37
8	63	50	41	36	61	49	41	36	48	40	35	46	40	35	45	39	35	33
9	59	46	38	32	57	45	37	32	44	37	32	43	36	32	42	36	32	30
10	55	42	35	29	54	42	34	29	41	34	29	40	33	29	39	33	29	27

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

	0°	45°	90°
0°	12747	12747	12747
5°	12776	12619	12697
10°	12695	12468	12468
15°	12549	12206	12115
20°	12349	11861	11643
25°	12093	11458	11167
30°	11845	11033	10571
35°	11569	10592	9972
40°	11237	10091	9326
45°	10932	9593	8668
50°	10583	9019	7971
55°	10210	8423	7214
60°	9799	7769	6441
65°	9423	6951	5681
70°	8875	6050	4824
75°	8184	5014	3922
80°	7136	3824	3599
85°	6048	3468	3243



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	134.8	4.1
10°-20°	376.0	11.3
20°-30°	542.8	16.4
30°-40°	615.2	18.6
40°-50°	594.0	17.9
50°-60°	493.8	14.9
60°-70°	340.9	10.3
70°-80°	172.2	5.2
80°-90°	43.7	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°	1053.6	31.8
0°-40°	1668.8	50.4
0°-60°	2756.5	83.2
0°-90°	3313.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3313.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1434	1434	1434	1434	1434	
5°	1432	1427	1414	1425	1423	136
15°	1364	1354	1326	1324	1316	384
25°	1233	1213	1168	1150	1139	568
35°	1066	1031	976	939	919	666
45°	870	829	763	709	690	671
55°	659	615	544	486	466	589
65°	448	401	330	283	270	442
75°	238	198	146	121	114	251
85°	59	37	34	32	32	69
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1434.0	1434.0	1434.0	1434.0	1434.0
2.5°	1438.4	1434.0	1421.9	1434.0	1432.9
5°	1431.8	1427.4	1414.2	1425.2	1423.0
7.5°	1421.9	1417.5	1401.0	1408.7	1405.4
10°	1406.5	1401.0	1381.3	1385.7	1381.3
12.5°	1386.8	1380.2	1356.0	1358.2	1351.6
15°	1363.7	1353.8	1326.4	1324.2	1316.5
17.5°	1337.3	1323.1	1291.2	1285.7	1274.8
20°	1305.5	1291.2	1253.9	1245.1	1230.8
22.5°	1270.4	1253.9	1213.3	1199.0	1188.0
25°	1233.0	1213.3	1168.3	1149.6	1138.6
27.5°	1194.6	1170.5	1123.2	1101.3	1085.9
30°	1154.0	1126.5	1074.9	1047.5	1029.9
32.5°	1111.2	1079.3	1025.5	992.6	976.1
35°	1066.1	1031.0	976.1	938.8	919.0
37.5°	1018.9	982.7	922.3	881.7	861.9
40°	968.4	932.2	869.6	823.5	803.7
42.5°	920.1	881.7	815.8	768.6	747.7
45°	869.6	829.0	763.1	709.3	689.5
47.5°	818.0	776.3	708.2	652.2	630.2
50°	765.3	722.5	652.2	597.3	576.4
52.5°	711.5	669.8	597.3	541.3	519.3
55°	658.8	614.9	543.5	486.4	465.5
57.5°	607.2	561.1	490.8	432.6	417.2
60°	551.2	507.3	437.0	379.9	362.3
62.5°	500.7	454.6	382.1	330.5	317.3
65°	448.0	400.8	330.5	283.3	270.1
67.5°	393.1	348.1	282.2	240.5	225.1
70°	341.5	295.4	232.8	196.5	185.6
72.5°	286.6	245.9	187.8	158.1	148.2
75°	238.3	197.6	146.0	120.8	114.2
77.5°	187.8	152.6	108.7	91.1	88.9
80°	139.4	107.6	74.7	71.4	70.3
82.5°	97.7	69.2	53.8	51.6	50.5
85°	59.3	37.3	34.0	31.8	31.8
87.5°	25.3	16.5	15.4	14.3	15.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)