

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: P242621

Luminaire Tested: **S124DR-S1020D935-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242621  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DR-S1020D935-X4F0-XX-UDD-F-W  
Description: DEFINE 4 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: 3517.1 lumens  
Efficiency: N/A  
Efficacy: 101.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29  
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')  
CIE Type: Direct

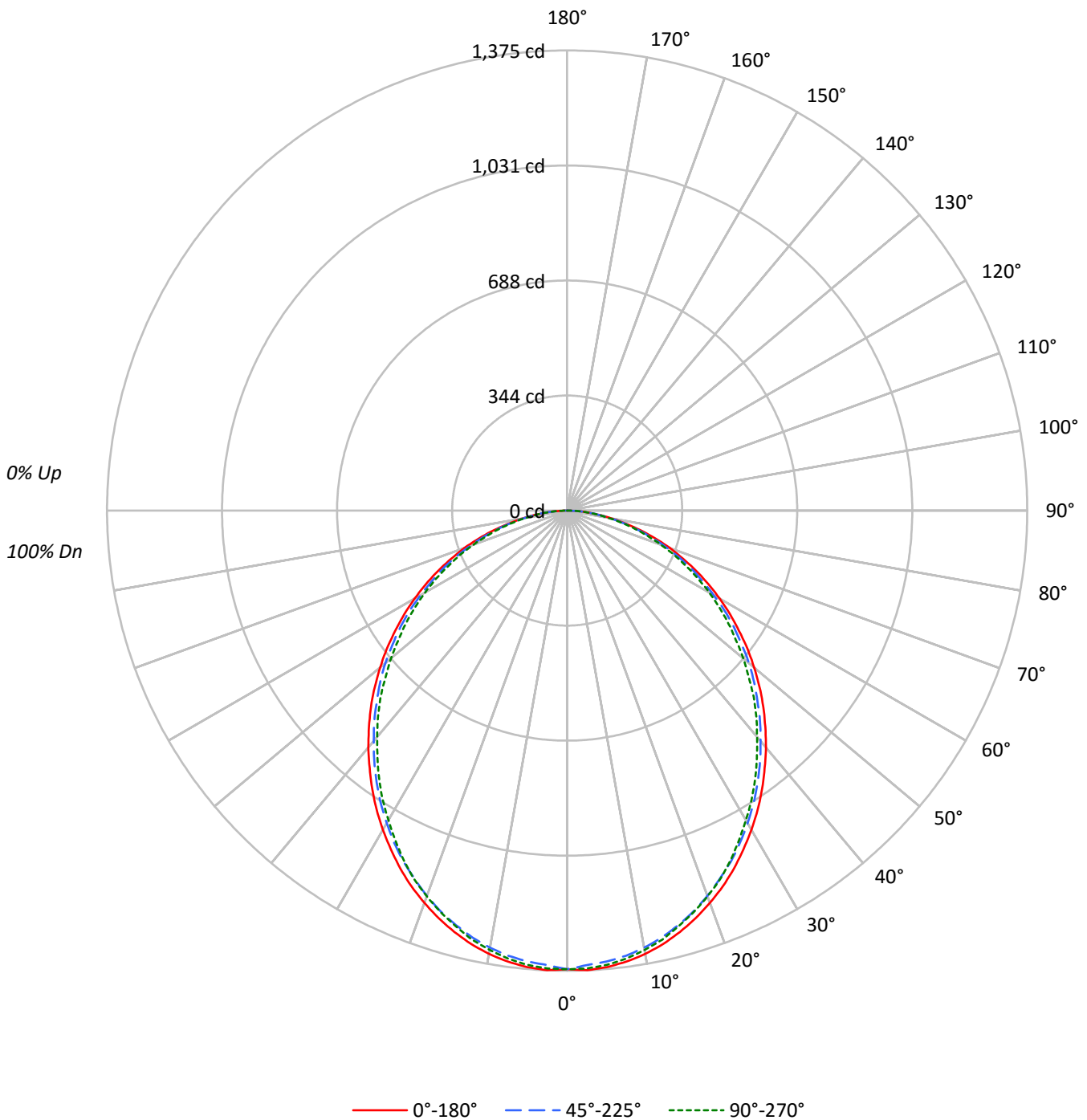
Input Watts (W): 34.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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	47	41	52	46	41	39
7	66	52	44	38	64	52	43	37	50	43	37	49	42	37	47	41	37	35
8	61	48	39	34	60	47	39	34	46	39	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	28	39	32	27	38	32	27	37	31	27	25

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

	0°	45°	90°
0°	12180	12180	12180
5°	12217	12070	12158
10°	12140	11972	12032
15°	11994	11802	11832
20°	11799	11592	11602
25°	11576	11351	11318
30°	11304	11067	10965
35°	11021	10771	10628
40°	10728	10435	10244
45°	10421	10103	9911
50°	10082	9809	9504
55°	9717	9427	9120
60°	9349	8999	8725
65°	8937	8592	8245
70°	8475	8046	7734
75°	7769	7391	7202
80°	6916	6634	6465
85°	6048	5824	5711



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	129.2	3.7
10°-20°	363.9	10.3
20°-30°	535.5	15.2
30°-40°	622.5	17.7
40°-50°	622.4	17.7
50°-60°	544.4	15.5
60°-70°	404.2	11.5
70°-80°	229.3	6.5
80°-90°	65.7	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°	1028.6	29.2
0°-40°	1651.1	46.9
0°-60°	2817.9	80.1
0°-90°	3517.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3517.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1370	1370	1370	1370	1370	
5°	1369	1365	1353	1365	1363	130
15°	1303	1299	1282	1289	1286	367
25°	1180	1173	1157	1158	1154	543
35°	1016	1008	993	985	979	635
45°	829	821	804	792	788	639
55°	627	624	608	595	588	562
65°	425	419	408	398	392	420
75°	226	221	215	211	210	240
85°	59	59	57	57	56	68
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1370.3	1370.3	1370.3	1370.3	1370.3
2.5°	1374.7	1371.4	1359.3	1370.3	1369.2
5°	1369.2	1364.8	1352.7	1364.8	1362.6
7.5°	1359.3	1354.9	1341.7	1351.6	1350.5
10°	1345.0	1340.6	1326.4	1335.2	1333.0
12.5°	1326.4	1322.0	1306.6	1316.5	1313.2
15°	1303.3	1298.9	1282.5	1289.0	1285.7
17.5°	1277.0	1271.5	1256.1	1260.5	1258.3
20°	1247.3	1241.8	1225.4	1228.6	1226.5
22.5°	1215.5	1207.8	1191.3	1197.9	1193.5
25°	1180.3	1172.7	1157.3	1158.4	1154.0
27.5°	1140.8	1133.1	1118.9	1116.7	1111.2
30°	1101.3	1092.5	1078.2	1073.8	1068.3
32.5°	1059.6	1051.9	1036.5	1031.0	1025.5
35°	1015.6	1008.0	992.6	984.9	979.4
37.5°	969.5	962.9	946.5	938.8	931.1
40°	924.5	915.7	899.3	888.3	882.8
42.5°	876.2	871.8	853.1	840.0	836.7
45°	829.0	821.3	803.7	791.6	788.4
47.5°	779.6	774.1	757.6	744.4	735.7
50°	729.1	724.7	709.3	693.9	687.3
52.5°	679.7	674.2	657.7	644.5	635.7
55°	627.0	623.7	608.3	595.1	588.5
57.5°	577.5	574.2	558.9	545.7	539.1
60°	525.9	520.4	506.2	496.3	490.8
62.5°	475.4	471.0	455.7	446.9	441.4
65°	424.9	419.4	408.5	397.5	392.0
67.5°	373.3	368.9	357.9	347.0	345.9
70°	326.1	318.4	309.6	300.8	297.6
72.5°	275.6	267.9	261.3	254.7	251.4
75°	226.2	220.7	215.2	210.8	209.7
77.5°	177.9	175.7	170.2	169.1	165.8
80°	135.1	131.8	129.6	127.4	126.3
82.5°	93.3	92.2	92.2	91.1	90.0
85°	59.3	59.3	57.1	57.1	56.0
87.5°	28.5	27.4	26.4	26.4	26.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)