

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: P231659

Luminaire Tested: **S121-DR-2-27-X-0048-1-U-DD-1-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231659  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33906)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S121-DR-2-27-X-0048-1-U-DD-1-W  
Description: DEFINE 1 LED LINEAR DIRECT RECESSED LED LUMINAIRE WITH FLUSH LENS.  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

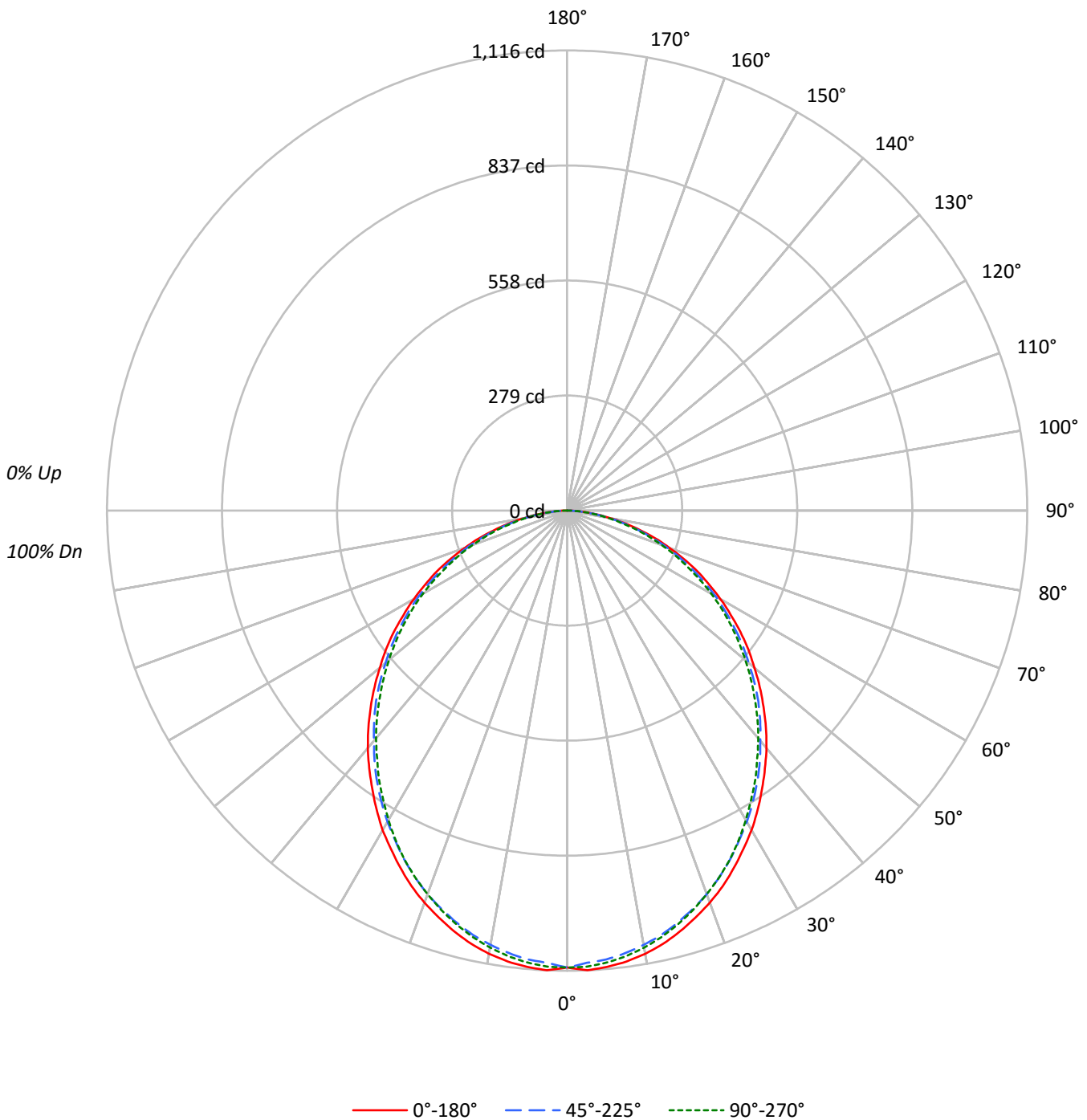
Lumens per Lamp: N/A  
Luminaire Lumens: 2853.0 lumens  
Efficiency: N/A  
Efficacy: 67.0 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3  
Luminous Opening: Rectangular (W 0.1' x L: 3.92' x H: 0')  
CIE Type: Direct

Input Watts (W): 42.6  
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	81	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°	30982	30982	30982
5°	31174	30669	30885
10°	30986	30365	30549
15°	30588	29954	30067
20°	30103	29451	29451
25°	29506	28830	28793
30°	28886	28137	27973
35°	28126	27423	27160
40°	27448	26602	26321
45°	26637	25925	25415
50°	25779	24996	24548
55°	25005	24127	23625
60°	24010	23221	22573
65°	23048	22029	21262
70°	21547	20705	19970
75°	19724	18882	18190
80°	17179	16358	15730
85°	14435	13184	12799



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	104.4	3.7
10°-20°	293.9	10.3
20°-30°	433.1	15.2
30°-40°	504.8	17.7
40°-50°	506.5	17.8
50°-60°	444.7	15.6
60°-70°	331.0	11.6
70°-80°	185.4	6.5
80°-90°	49.3	1.7
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°	831.4	29.1
0°-40°	1336.2	46.8
0°-60°	2287.3	80.2
0°-90°	2853.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2853.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1108	1108	1108	1108	1108	
5°	1111	1104	1093	1103	1100	105
15°	1057	1048	1035	1043	1039	298
25°	956	946	935	936	933	441
35°	824	815	804	800	796	516
45°	674	667	656	647	643	520
55°	513	506	495	488	485	458
65°	348	342	333	326	321	344
75°	183	179	175	168	168	195
85°	45	44	41	41	40	53
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1108.2	1108.2	1108.2	1108.2	1108.2
2.5°	1115.9	1109.5	1097.9	1109.5	1106.9
5°	1110.8	1104.3	1092.8	1103.1	1100.5
7.5°	1103.1	1095.3	1082.5	1092.8	1090.2
10°	1091.5	1081.2	1069.6	1077.3	1076.1
12.5°	1076.1	1067.1	1054.2	1061.9	1059.3
15°	1056.8	1047.8	1034.9	1042.6	1038.8
17.5°	1034.9	1025.9	1013.1	1019.5	1015.6
20°	1011.8	1001.5	989.9	995.1	989.9
22.5°	986.1	975.8	962.9	966.8	962.9
25°	956.5	946.2	934.6	935.9	933.4
27.5°	925.6	916.6	902.5	905.1	901.2
30°	894.8	885.8	871.6	870.4	866.5
32.5°	860.1	851.1	838.2	835.7	830.5
35°	824.1	815.1	803.5	799.7	795.8
37.5°	788.1	780.4	767.5	762.4	757.2
40°	752.1	743.1	728.9	723.8	721.2
42.5°	713.5	704.5	692.9	685.2	682.7
45°	673.7	667.2	655.7	646.7	642.8
47.5°	633.8	627.4	615.8	606.8	604.2
50°	592.7	587.5	574.7	567.0	564.4
52.5°	554.1	549.0	536.1	528.4	524.5
55°	513.0	506.5	495.0	488.5	484.7
57.5°	470.5	466.7	455.1	448.7	444.8
60°	429.4	424.3	415.3	406.3	403.7
62.5°	388.3	384.4	374.1	366.4	362.5
65°	348.4	342.0	333.0	326.5	321.4
67.5°	306.0	302.1	293.1	286.7	282.8
70°	263.6	259.7	253.3	246.8	244.3
72.5°	225.0	218.6	212.1	208.3	205.7
75°	182.6	178.7	174.8	168.4	168.4
77.5°	145.3	140.1	137.6	133.7	131.1
80°	106.7	105.4	101.6	100.3	97.7
82.5°	75.9	73.3	69.4	68.1	66.9
85°	45.0	43.7	41.1	41.1	39.9
87.5°	20.6	19.3	16.7	15.4	15.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)