

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: P231719

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P231719
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33908)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S121-RDR-2-27-X-0048-1-U-DD-1-W
Description: DEFINE 1 LED LINEAR REGRESSED 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: 2345.1 lumens
Efficiency: N/A
Efficacy: 55.0 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 0.93 / 1.1
Luminous Opening: Rectangular (W 0.1' x L: 3.92' x H: 0')
CIE Type: Direct

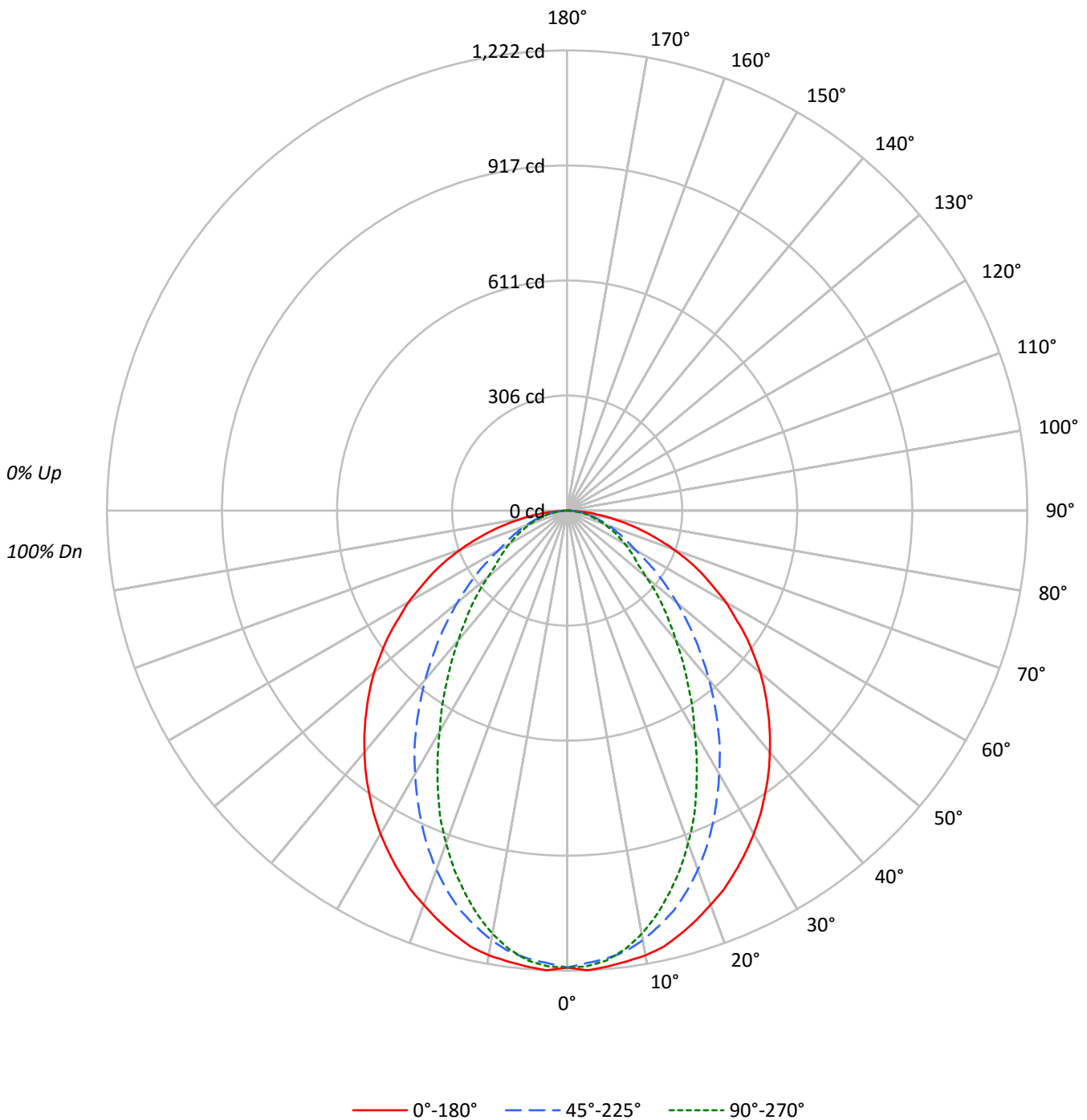
Input Watts (W): 42.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88	86
2	101	94	88	83	99	92	86	82	89	84	80	85	81	78	82	79	76	74
3	93	84	76	70	91	82	75	70	79	73	69	77	72	67	74	70	66	64
4	86	75	67	61	84	74	66	61	71	65	60	69	64	59	67	62	58	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44
7	69	57	48	43	67	56	48	42	54	47	42	53	47	42	52	46	42	40
8	65	52	44	39	63	51	44	38	50	43	38	49	43	38	48	42	38	36
9	61	48	40	35	59	47	40	35	46	40	35	45	39	35	44	39	35	33
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	41	36	32	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	33926	33926	33926
5°	34123	33517	33652
10°	34041	32880	32403
15°	33696	31786	30394
20°	33137	30207	27955
25°	32615	28241	25054
30°	31998	26065	21836
35°	31287	23826	19027
40°	30562	21397	16401
45°	29831	18954	14249
50°	29106	16567	11913
55°	28168	14233	10660
60°	27208	11692	9875
65°	26071	10571	9222
70°	24555	9719	8542
75°	22457	8825	7788
80°	19529	7744	7165
85°	15429	6544	6159



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.7	4.8
10°-20°	310.2	13.2
20°-30°	425.7	18.2
30°-40°	448.2	19.1
40°-50°	399.3	17.0
50°-60°	306.9	13.1
60°-70°	205.5	8.8
70°-80°	107.4	4.6
80°-90°	28.2	1.2
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°	849.5	36.2
0°-40°	1297.8	55.3
0°-60°	2004.0	85.5
0°-90°	2345.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2345.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1214	1214	1214	1214	1214	
5°	1216	1209	1194	1203	1199	115
15°	1164	1149	1098	1070	1050	328
25°	1057	1013	916	846	812	487
35°	917	841	698	594	558	574
45°	754	648	479	386	360	582
55°	578	451	292	226	219	516
65°	394	258	160	143	139	389
75°	208	106	82	74	72	220
85°	48	23	20	19	19	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1213.5	1213.5	1213.5	1213.5	1213.5
2.5°	1221.9	1214.7	1202.7	1213.5	1211.1
5°	1215.9	1208.7	1194.3	1202.7	1199.1
7.5°	1207.5	1197.9	1181.1	1183.5	1175.1
10°	1199.1	1185.9	1158.2	1152.2	1141.4
12.5°	1185.9	1171.4	1129.4	1112.6	1099.4
15°	1164.2	1148.6	1098.2	1070.5	1050.1
17.5°	1140.2	1116.2	1058.5	1020.1	998.4
20°	1113.8	1084.9	1015.3	966.0	939.6
22.5°	1088.5	1050.1	967.2	908.3	880.7
25°	1057.3	1012.9	915.5	845.8	812.2
27.5°	1024.9	970.8	861.5	783.4	744.9
30°	991.2	928.7	807.4	717.3	676.4
32.5°	955.2	884.3	754.5	654.8	618.8
35°	916.7	841.0	698.1	593.5	557.5
37.5°	878.3	791.8	640.4	535.9	503.4
40°	837.4	744.9	586.3	481.8	449.4
42.5°	796.6	695.7	531.1	432.5	402.5
45°	754.5	647.6	479.4	385.7	360.4
47.5°	712.5	598.3	428.9	341.2	317.2
50°	669.2	549.1	380.9	299.2	273.9
52.5°	622.4	499.8	335.2	257.1	239.1
55°	577.9	450.6	292.0	225.9	218.7
57.5°	528.7	401.3	249.9	204.3	197.0
60°	486.6	352.0	209.1	183.8	176.6
62.5°	437.3	304.0	182.6	163.4	157.4
65°	394.1	258.3	159.8	143.0	139.4
67.5°	348.4	213.9	138.2	125.0	120.1
70°	300.4	171.8	118.9	106.9	104.5
72.5°	253.5	133.4	98.5	90.1	88.9
75°	207.9	105.7	81.7	74.5	72.1
77.5°	163.4	80.5	64.9	60.1	58.9
80°	121.3	58.9	48.1	45.7	44.5
82.5°	82.9	39.6	33.6	31.2	31.2
85°	48.1	22.8	20.4	19.2	19.2
87.5°	18.0	9.6	8.4	8.4	8.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)