

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: P243071

Luminaire Tested: **S121RDR-H490D940-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243071
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-62)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S121RDR-H490D940-X4F0-XX-UDD-F-W
Description: DEFINE 1 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1304.6 lumens
Efficiency: N/A
Efficacy: 75.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 0.92 / 1.09
Luminous Opening: Rectangular (W 0.09' x L: 3.88' x H: 0')
CIE Type: Direct

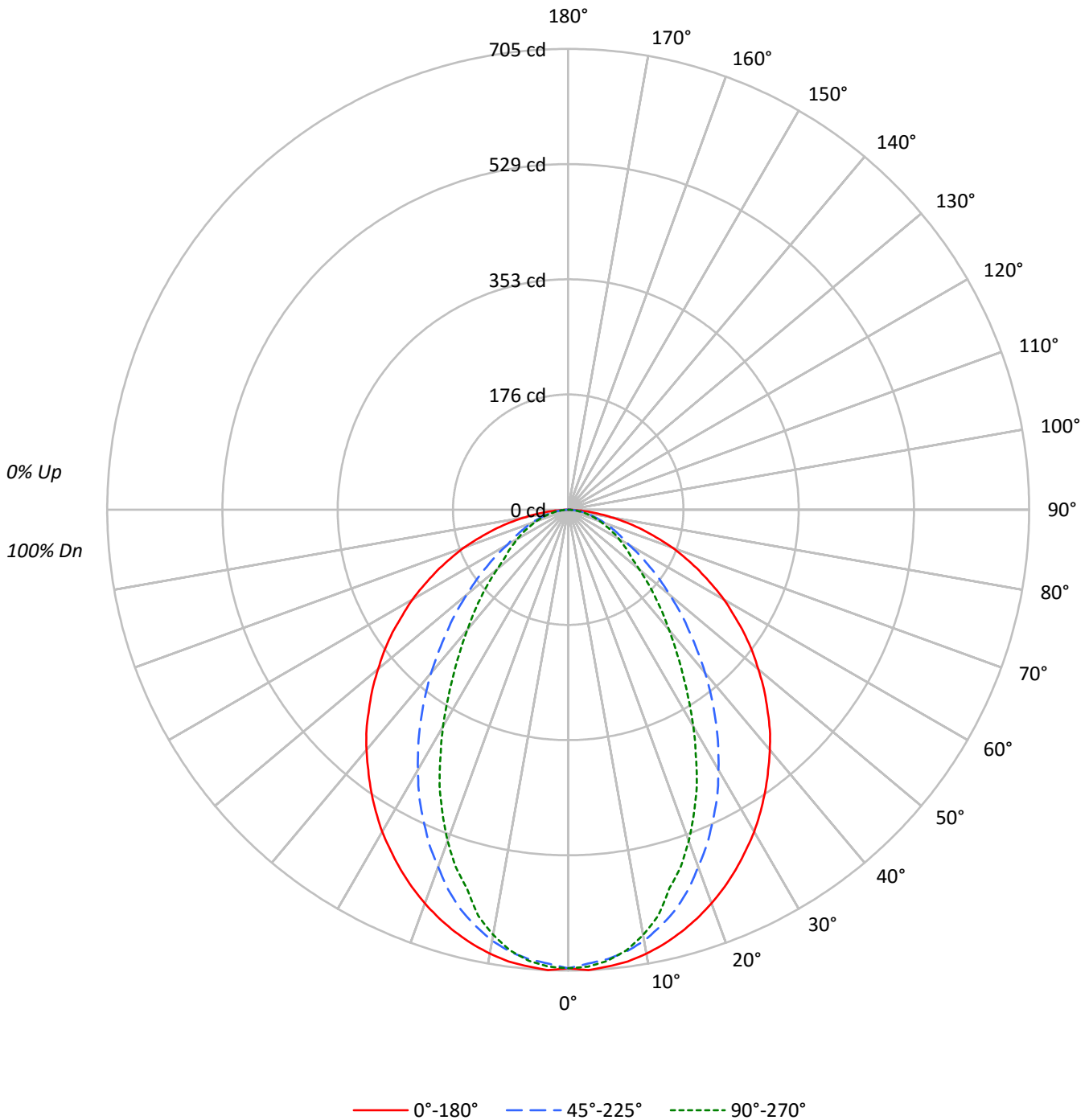
Input Watts (W): 17.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	104	100	97	100	97	94	96	94	91	92	90	89	87
2	102	94	88	83	99	92	87	82	89	84	80	86	82	79	83	80	77	75
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57
5	80	69	60	54	78	67	60	54	65	59	54	64	58	53	62	57	52	50
6	75	62	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	45
7	70	57	49	43	68	56	49	43	55	48	43	54	47	43	52	47	42	41
8	65	53	45	39	64	52	44	39	51	44	39	50	43	39	48	43	39	37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	36	32	31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	20785	20785	20785
5°	20865	20529	20600
10°	20748	20140	19872
15°	20515	19439	18380
20°	20208	18332	17002
25°	19845	17121	15218
30°	19464	15721	13097
35°	19008	14215	11011
40°	18558	12602	9267
45°	18035	10937	7848
50°	17484	9316	6523
55°	16954	7862	5806
60°	16308	6376	5321
65°	15501	5707	4880
70°	14675	5146	4479
75°	13406	4625	4087
80°	11466	4061	3651
85°	8907	3434	3026



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.7	5.0
10°-20°	178.5	13.7
20°-30°	243.6	18.7
30°-40°	252.5	19.4
40°-50°	220.3	16.9
50°-60°	165.8	12.7
60°-70°	108.7	8.3
70°-80°	55.4	4.2
80°-90°	14.1	1.1
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°	487.8	37.4
0°-40°	740.3	56.7
0°-60°	1126.4	86.3
0°-90°	1304.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1304.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	702	702	702	702	702	
5°	702	698	690	694	693	67
15°	669	659	634	616	599	189
25°	607	582	524	480	466	280
35°	526	480	393	327	304	329
45°	430	368	261	203	187	332
55°	328	250	152	115	112	293
65°	221	138	81	72	70	219
75°	117	54	40	37	36	124
85°	26	11	10	9	9	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	701.5	701.5	701.5	701.5	701.5
2.5°	705.1	702.1	695.0	700.9	699.7
5°	701.5	697.9	690.2	694.4	692.6
7.5°	697.3	692.6	681.9	683.7	680.1
10°	689.6	683.7	669.4	665.8	660.5
12.5°	680.1	673.6	652.7	644.4	636.1
15°	668.8	659.3	633.7	615.9	599.2
17.5°	655.7	643.8	609.9	585.0	572.5
20°	640.9	625.4	581.4	552.3	539.2
22.5°	624.8	605.2	554.7	517.8	502.3
25°	607.0	582.0	523.7	479.8	465.5
27.5°	587.9	559.4	494.0	443.5	422.7
30°	568.9	533.3	459.5	403.1	382.8
32.5°	547.5	507.1	426.8	364.4	341.8
35°	525.5	480.3	393.0	327.0	304.4
37.5°	502.3	453.6	359.1	292.5	270.5
40°	479.8	424.5	325.8	259.2	239.6
42.5°	456.6	395.3	292.5	230.1	213.4
45°	430.4	368.0	261.0	202.7	187.3
47.5°	406.0	338.3	232.4	178.3	164.1
50°	379.3	309.1	202.1	155.8	141.5
52.5°	354.3	279.4	177.2	132.0	123.1
55°	328.2	249.7	152.2	115.3	112.4
57.5°	300.2	220.6	130.2	103.4	99.9
60°	275.2	192.6	107.6	92.7	89.8
62.5°	247.3	164.7	93.3	82.6	79.7
65°	221.1	137.9	81.4	71.9	69.6
67.5°	195.0	113.5	70.1	62.4	60.0
70°	169.4	90.4	59.4	53.5	51.7
72.5°	141.5	68.4	49.9	45.2	44.0
75°	117.1	53.5	40.4	36.9	35.7
77.5°	91.6	40.4	31.5	29.1	28.5
80°	67.2	29.1	23.8	22.0	21.4
82.5°	45.8	19.6	16.6	15.5	14.9
85°	26.2	10.7	10.1	8.9	8.9
87.5°	10.1	4.2	3.6	3.6	3.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)