

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: P243015

Luminaire Tested: **S121DR-H880D830-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243015
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-52)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S121DR-H880D830-X4F0-XX-UDD-D-W
Description: DEFINE 1 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3141.7 lumens
Efficiency: N/A
Efficacy: 99.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.34 / 1.43
Luminous Opening: Rectangular w/ Sides (W: 0.09' x L: 3.88' x H: 0.08')
CIE Type: Semi-Direct

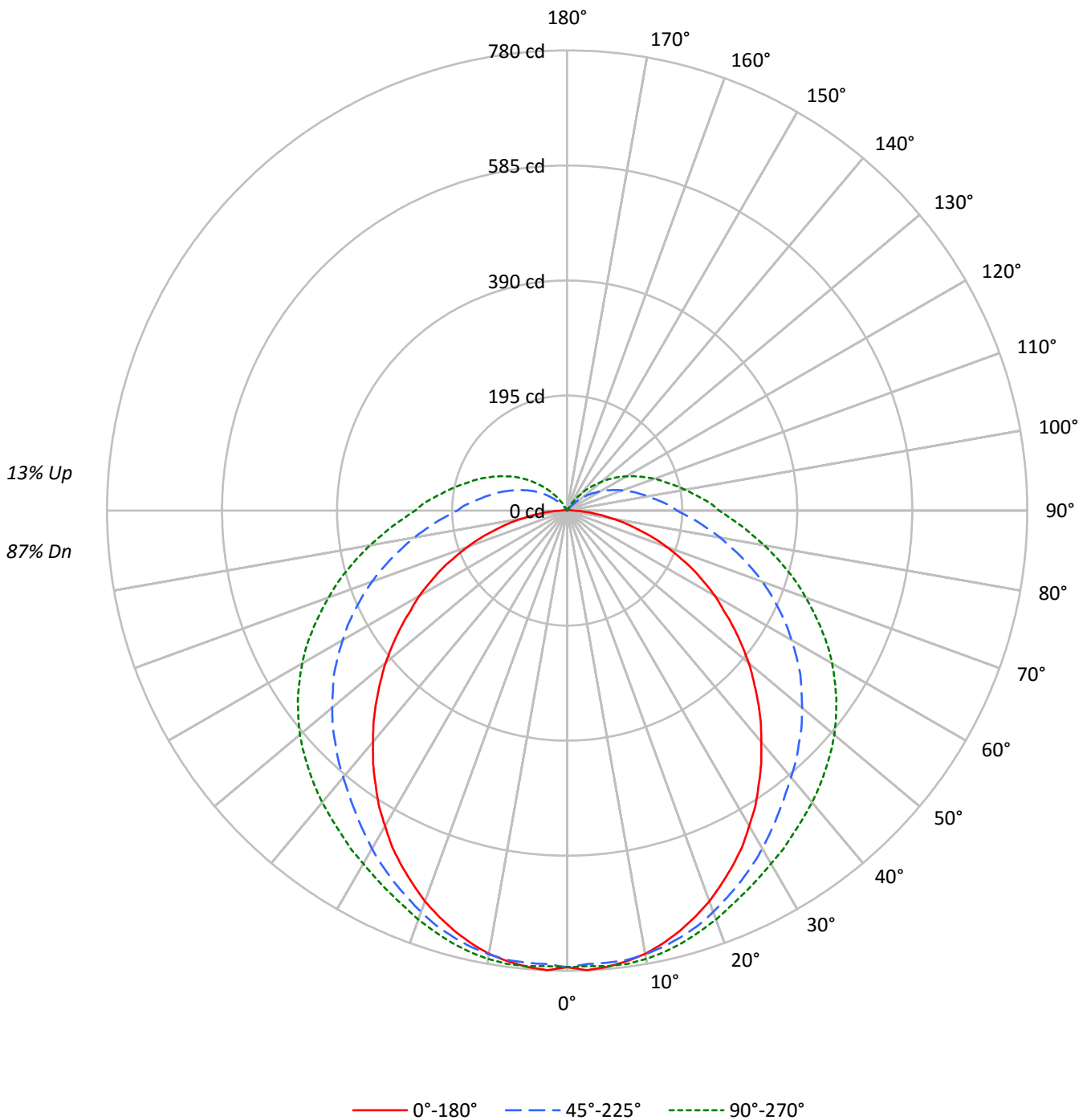
Input Watts (W): 31.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	116	116	116	116	112	112	112	112	104	104	104	97	97	97	90	90	90	87
1	103	97	92	87	99	94	89	84	87	83	79	81	78	75	75	72	70	67
2	93	83	75	69	89	80	73	67	74	69	63	69	64	60	64	60	57	54
3	84	72	63	56	80	70	61	55	65	58	52	60	54	50	56	51	47	44
4	76	64	54	47	73	61	53	46	57	50	44	53	47	42	49	44	40	37
5	70	56	47	40	67	54	46	39	51	43	37	47	41	36	44	39	34	32
6	65	51	41	34	62	49	40	34	46	38	32	43	36	31	40	34	30	27
7	60	46	37	30	57	44	36	30	41	34	29	39	32	27	36	31	26	24
8	55	42	33	27	53	40	32	26	38	31	25	36	29	24	33	28	23	21
9	52	38	30	24	50	37	29	24	35	28	23	33	26	22	31	25	21	19
10	48	35	27	22	47	34	26	21	32	25	21	30	24	20	29	23	19	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	22933	22933	22933
5°	23046	21667	21390
10°	22861	20638	20072
15°	22499	19567	18782
20°	22051	18498	17575
25°	21489	17466	16500
30°	20864	16505	15628
35°	20180	15591	14904
40°	19445	14822	14308
45°	18763	14176	13748
50°	18058	13559	13236
55°	17236	12981	12683
60°	16534	12306	12104
65°	15743	11666	11471
70°	14666	11008	10825
75°	13353	10309	10201
80°	11741	9660	9584
85°	10233	9046	9023



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.7	2.3
10°-20°	211.5	6.7
20°-30°	320.0	10.2
30°-40°	391.1	12.4
40°-50°	424.5	13.5
50°-60°	419.0	13.3
60°-70°	375.3	11.9
70°-80°	301.9	9.6
80°-90°	218.2	6.9
90°-100°	156.3	5.0
100°-110°	111.6	3.6
110°-120°	73.8	2.4
120°-130°	42.0	1.3
130°-140°	18.8	0.6
140°-150°	4.0	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	605.2	19.3
0°-40°	996.2	31.7
0°-60°	1839.8	58.6
0°-90°	2735.2	87.1
90°-120°	341.7	10.9
90°-150°	406.4	12.9
90°-180°	406.0	12.9
0°-180°	3141.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	774	774	774	774	774	
5°	776	774	770	777	775	74
15°	738	746	748	758	758	208
25°	664	681	695	710	714	306
35°	566	596	625	658	668	354
45°	457	500	556	604	620	353
55°	344	402	482	538	557	308
65°	235	308	396	457	476	231
75°	126	212	306	367	385	134
85°	38	127	222	279	296	39
90°	9	95	186	242	258	6
95°	7	76	162	214	230	5
105°	3	45	119	165	178	4
115°	2	22	82	124	136	2
125°	1	2	50	85	96	1
135°	0	0	19	48	57	0
145°	0	0	0	12	20	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	774.0	774.0	774.0	774.0	774.0
2.5°	779.7	775.1	769.5	775.1	772.9
5°	776.3	774.0	769.5	777.4	775.1
7.5°	770.6	770.6	768.3	776.3	775.1
10°	762.7	764.9	763.8	772.9	771.7
12.5°	751.3	755.9	757.0	767.2	766.1
15°	737.7	745.6	747.9	758.1	758.1
17.5°	721.8	732.0	737.7	747.9	747.9
20°	704.8	716.1	724.1	736.6	737.7
22.5°	684.4	700.2	709.3	724.1	725.2
25°	663.9	680.9	694.6	710.5	713.9
27.5°	642.4	661.7	678.7	696.8	702.5
30°	617.4	639.0	661.7	683.2	691.2
32.5°	593.6	618.5	643.5	670.7	680.9
35°	566.3	595.8	625.3	658.3	668.5
37.5°	540.2	572.0	607.2	644.6	657.1
40°	511.8	548.2	590.2	632.1	645.8
42.5°	485.7	523.2	574.3	617.4	633.3
45°	457.4	500.5	556.1	603.8	619.7
47.5°	429.0	475.5	539.1	587.9	606.0
50°	401.8	450.6	519.8	573.1	591.3
52.5°	372.3	427.9	500.5	555.0	574.3
55°	343.9	401.8	482.3	537.9	557.2
57.5°	314.4	380.2	460.8	519.8	537.9
60°	289.4	355.2	439.2	499.4	518.7
62.5°	261.0	331.4	418.8	477.8	498.2
65°	234.9	307.6	396.1	457.4	475.5
67.5°	205.4	283.7	374.5	434.7	452.8
70°	179.3	259.9	351.8	412.0	430.1
72.5°	153.2	237.2	329.1	390.4	408.6
75°	126.0	212.2	306.4	366.6	384.7
77.5°	102.1	189.5	283.7	343.9	362.0
80°	77.2	166.8	263.3	322.3	339.3
82.5°	56.7	146.4	241.7	300.8	316.6
85°	37.5	127.1	222.4	279.2	296.2
87.5°	21.6	110.1	203.1	259.9	275.8
90°	9.1	95.3	186.1	241.7	257.6
92.5°	6.8	86.3	175.9	229.3	245.1
95°	6.8	76.0	162.3	214.5	230.4
97.5°	5.7	67.0	149.8	200.9	215.6
100°	4.5	59.0	139.6	188.4	203.1
102.5°	4.5	52.2	128.2	175.9	190.7
105°	3.4	45.4	119.2	164.6	178.2
107.5°	3.4	38.6	109.0	154.3	168.0
110°	2.3	32.9	99.9	144.1	157.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.3	27.2	90.8	133.9	146.4
115°	2.3	21.6	81.7	123.7	136.2
117.5°	1.1	15.9	73.8	113.5	126.0
120°	1.1	11.3	65.8	103.3	115.8
122.5°	1.1	5.7	56.7	94.2	106.7
125°	1.1	2.3	49.9	85.1	96.5
127.5°	0.0	0.0	42.0	74.9	86.3
130°	0.0	0.0	34.0	65.8	76.0
132.5°	0.0	0.0	27.2	56.7	65.8
135°	0.0	0.0	19.3	47.7	56.7
137.5°	0.0	0.0	12.5	38.6	47.7
140°	0.0	0.0	5.7	29.5	37.5
142.5°	0.0	0.0	1.1	21.6	28.4
145°	0.0	0.0	0.0	12.5	20.4
147.5°	0.0	0.0	0.0	4.5	11.3
150°	0.0	0.0	0.0	0.0	3.4
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)