

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: P243025

Luminaire Tested: **S121DR-H1025D840-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243025
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-H1025D840-X4F0-XX-UDD-D-W
Description: DEFINE 1 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3932.2 lumens
Efficiency: N/A
Efficacy: 104.3 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

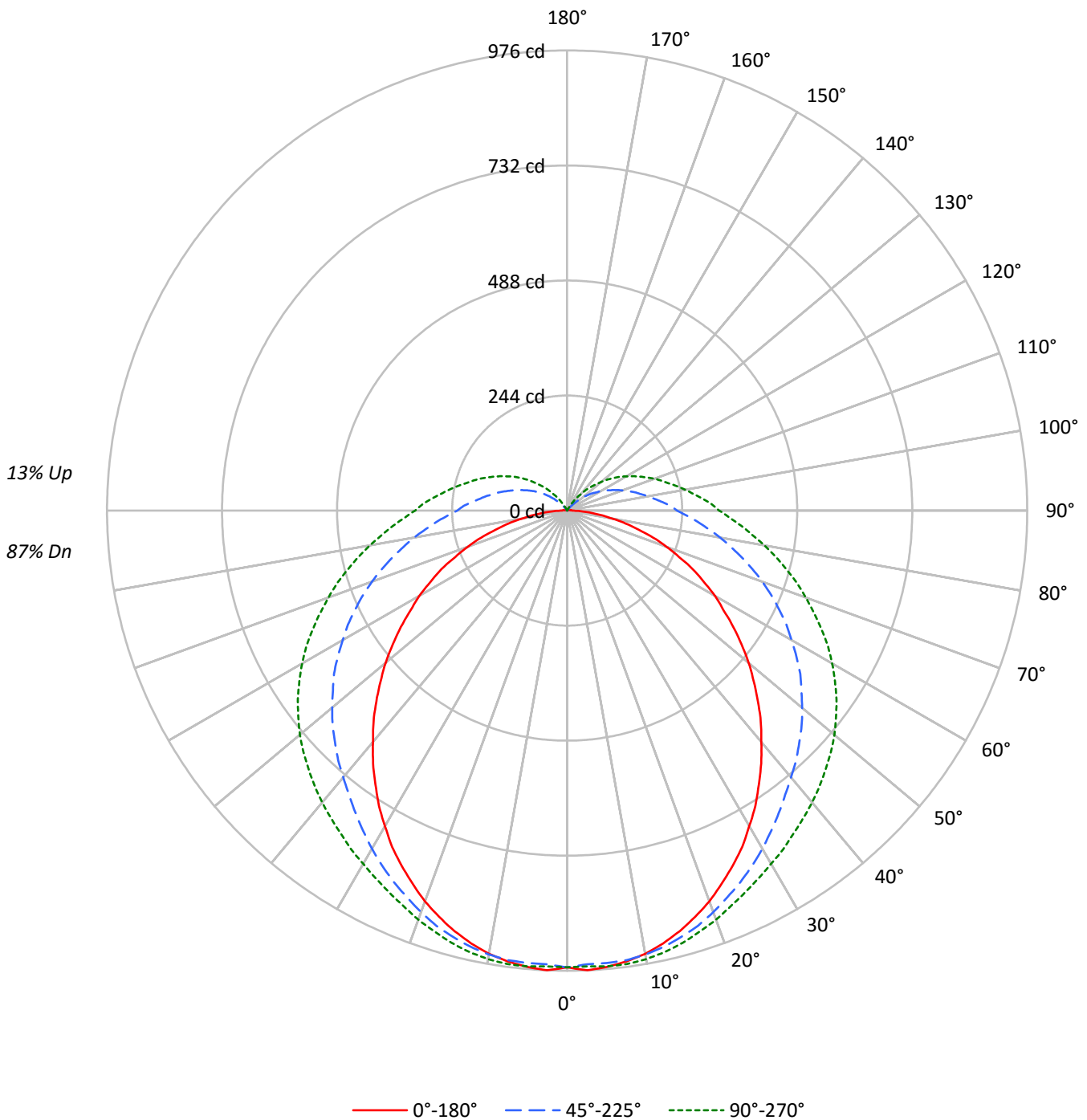
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	28705	28705	28705
5°	28844	27118	26774
10°	28612	25831	25123
15°	28160	24491	23508
20°	27598	23152	21997
25°	26898	21859	20651
30°	26113	20655	19560
35°	25258	19515	18654
40°	24338	18552	17908
45°	23484	17743	17206
50°	22602	16971	16567
55°	21571	16248	15877
60°	20693	15402	15149
65°	19704	14602	14359
70°	18356	13780	13551
75°	16712	12904	12768
80°	14691	12093	11996
85°	12798	11324	11293



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.2	2.3
10°-20°	264.8	6.7
20°-30°	400.5	10.2
30°-40°	489.5	12.4
40°-50°	531.4	13.5
50°-60°	524.4	13.3
60°-70°	469.8	11.9
70°-80°	377.9	9.6
80°-90°	273.1	6.9
90°-100°	195.6	5.0
100°-110°	139.6	3.6
110°-120°	92.4	2.3
120°-130°	52.6	1.3
130°-140°	23.5	0.6
140°-150°	5.0	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	757.4	19.3
0°-40°	1246.9	31.7
0°-60°	2302.7	58.6
0°-90°	3423.5	87.1
90°-120°	427.6	10.9
90°-150°	508.7	12.9
90°-180°	509.0	12.9
0°-180°	3932.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	969	969	969	969	969	
5°	972	969	963	973	970	92
15°	923	933	936	949	949	260
25°	831	852	869	889	894	383
35°	709	746	783	824	837	444
45°	572	626	696	756	776	442
55°	430	503	604	673	698	385
65°	294	385	496	572	595	290
75°	158	266	384	459	482	168
85°	47	159	278	349	371	49
90°	11	119	233	303	322	8
95°	8	95	203	268	288	6
105°	4	57	149	206	223	5
115°	3	27	102	155	170	2
125°	1	3	62	106	121	1
135°	0	0	24	60	71	0
145°	0	0	0	16	26	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°	968.8	968.8	968.8	968.8	968.8
2.5°	975.9	970.2	963.1	970.2	967.4
5°	971.6	968.8	963.1	973.0	970.2
7.5°	964.5	964.5	961.7	971.6	970.2
10°	954.6	957.4	956.0	967.4	965.9
12.5°	940.4	946.0	947.5	960.3	958.8
15°	923.3	933.3	936.1	948.9	948.9
17.5°	903.4	916.2	923.3	936.1	936.1
20°	882.1	896.3	906.3	921.9	923.3
22.5°	856.6	876.4	887.8	906.3	907.7
25°	831.0	852.3	869.3	889.2	893.5
27.5°	804.0	828.1	849.5	872.2	879.3
30°	772.7	799.7	828.1	855.1	865.1
32.5°	742.9	774.2	805.4	839.5	852.3
35°	708.8	745.8	782.7	823.9	836.7
37.5°	676.2	715.9	760.0	806.8	822.5
40°	640.6	686.1	738.7	791.2	808.3
42.5°	608.0	654.8	718.8	772.7	792.6
45°	572.5	626.4	696.0	755.7	775.6
47.5°	536.9	595.2	674.7	735.8	758.5
50°	502.9	563.9	650.6	717.3	740.1
52.5°	465.9	535.5	626.4	694.6	718.8
55°	430.4	502.9	603.7	673.3	697.5
57.5°	393.5	475.9	576.7	650.6	673.3
60°	362.2	444.6	549.7	625.0	649.2
62.5°	326.7	414.8	524.2	598.0	623.6
65°	294.0	385.0	495.8	572.5	595.2
67.5°	257.1	355.1	468.8	544.0	566.8
70°	224.4	325.3	440.4	515.6	538.4
72.5°	191.8	296.9	411.9	488.6	511.4
75°	157.7	265.6	383.5	458.8	481.5
77.5°	127.8	237.2	355.1	430.4	453.1
80°	96.6	208.8	329.6	403.4	424.7
82.5°	71.0	183.2	302.6	376.4	396.3
85°	46.9	159.1	278.4	349.4	370.7
87.5°	27.0	137.8	254.3	325.3	345.2
90°	11.4	119.3	233.0	302.6	322.5
92.5°	8.5	108.0	220.2	286.9	306.8
95°	8.5	95.2	203.1	268.5	288.4
97.5°	7.1	83.8	187.5	251.4	269.9
100°	5.7	73.9	174.7	235.8	254.3
102.5°	5.7	65.3	160.5	220.2	238.6
105°	4.3	56.8	149.2	206.0	223.0
107.5°	4.3	48.3	136.4	193.2	210.2
110°	2.8	41.2	125.0	180.4	197.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.8	34.1	113.6	167.6	183.2
115°	2.8	27.0	102.3	154.8	170.5
117.5°	1.4	19.9	92.3	142.0	157.7
120°	1.4	14.2	82.4	129.3	144.9
122.5°	1.4	7.1	71.0	117.9	133.5
125°	1.4	2.8	62.5	106.5	120.7
127.5°	0.0	0.0	52.6	93.8	108.0
130°	0.0	0.0	42.6	82.4	95.2
132.5°	0.0	0.0	34.1	71.0	82.4
135°	0.0	0.0	24.1	59.7	71.0
137.5°	0.0	0.0	15.6	48.3	59.7
140°	0.0	0.0	7.1	36.9	46.9
142.5°	0.0	0.0	1.4	27.0	35.5
145°	0.0	0.0	0.0	15.6	25.6
147.5°	0.0	0.0	0.0	5.7	14.2
150°	0.0	0.0	0.0	0.0	4.3
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)