

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: P242175

Luminaire Tested: **S121DR-S1025D935-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242175
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-13)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S121DR-S1025D935-X4F0-XX-UDD-D-W
Description: DEFINE 1 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3486.9 lumens
Efficiency: N/A
Efficacy: 84.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.34 / 1.44
Luminous Opening: Rectangular w/ Sides (W: 0.09' x L: 3.88' x H: 0.08')
CIE Type: Semi-Direct

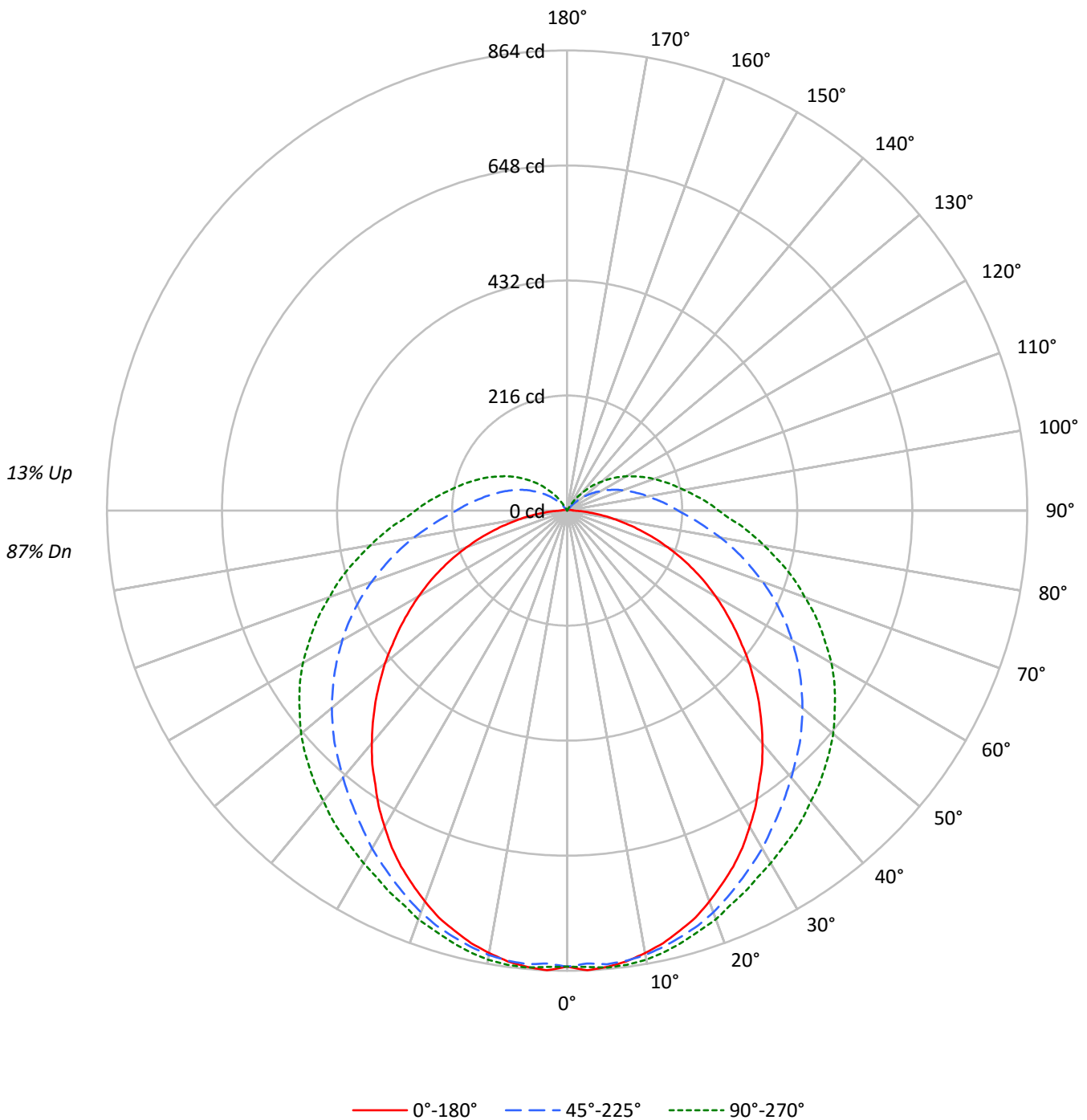
Input Watts (W): 41.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P242175

CATALOG NUMBER: S121DR-S1025D935-X4F0-XX-UDD-D-W

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	77	75	75	72	70	67
2	93	83	75	69	89	80	73	67	74	68	63	69	64	60	64	60	57	54
3	84	72	63	56	80	70	61	55	65	58	52	60	54	49	56	51	47	44
4	76	63	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	28	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	23	35	28	23	33	26	22	31	25	21	19
10	48	35	27	22	47	34	26	21	32	25	20	30	24	20	29	23	19	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	25369	25369	25369
5°	25534	24074	23769
10°	25282	22894	22270
15°	24909	21668	20771
20°	24435	20503	19457
25°	23875	19316	18257
30°	23156	18271	17283
35°	22371	17276	16501
40°	21671	16439	15774
45°	20888	15744	15174
50°	20072	15046	14597
55°	19185	14356	13972
60°	18373	13659	13371
65°	17532	12965	12682
70°	16384	12219	11947
75°	15006	11464	11302
80°	13383	10721	10598
85°	11489	10019	9989



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.7	2.3
10°-20°	234.5	6.7
20°-30°	354.5	10.2
30°-40°	433.5	12.4
40°-50°	470.6	13.5
50°-60°	464.3	13.3
60°-70°	416.7	12.0
70°-80°	335.4	9.6
80°-90°	242.3	6.9
90°-100°	173.1	5.0
100°-110°	124.0	3.6
110°-120°	82.7	2.4
120°-130°	47.5	1.4
130°-140°	21.5	0.6
140°-150°	4.7	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	670.7	19.2
0°-40°	1104.2	31.7
0°-60°	2039.1	58.5
0°-90°	3033.5	87.0
90°-120°	379.8	10.9
90°-150°	453.4	13.0
90°-180°	453.0	13.0
0°-180°	3486.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	856	856	856	856	856	
5°	860	859	855	863	861	82
15°	817	828	828	840	838	230
25°	738	757	768	786	790	339
35°	628	662	693	727	740	394
45°	509	555	618	667	684	393
55°	383	449	533	595	614	343
65°	262	344	440	505	526	259
75°	142	237	341	406	426	150
85°	42	143	246	309	328	44
90°	12	107	208	267	285	8
95°	9	86	180	237	253	7
105°	5	51	131	182	198	6
115°	4	26	92	136	151	4
125°	3	4	56	94	107	2
135°	1	1	22	54	64	1
145°	0	0	0	15	22	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°	856.2	856.2	856.2	856.2	856.2
2.5°	863.9	860.1	851.1	860.1	857.5
5°	860.1	858.8	855.0	862.6	861.3
7.5°	853.7	856.2	852.4	862.6	860.1
10°	843.5	849.9	847.3	857.5	856.2
12.5°	832.0	839.7	838.4	849.9	848.6
15°	816.7	828.2	828.2	839.7	838.4
17.5°	801.4	812.9	816.7	829.4	826.9
20°	781.0	796.3	802.6	814.1	816.7
22.5°	759.3	778.4	786.1	800.1	801.4
25°	737.6	756.7	768.2	786.1	789.9
27.5°	713.3	735.0	750.3	770.7	775.8
30°	685.2	712.0	732.5	755.4	764.4
32.5°	658.5	687.8	712.0	742.7	751.6
35°	627.8	662.3	692.9	727.4	740.1
37.5°	601.0	636.8	673.8	713.3	727.4
40°	570.4	608.7	654.6	698.0	712.0
42.5°	539.8	583.2	635.5	684.0	699.3
45°	509.2	555.1	617.6	667.4	684.0
47.5°	477.2	529.6	597.2	650.8	668.7
50°	446.6	502.8	576.8	632.9	652.1
52.5°	413.4	476.0	555.1	613.8	632.9
55°	382.8	449.2	533.4	594.6	613.8
57.5°	352.2	422.4	510.4	573.0	594.6
60°	321.6	395.6	487.5	551.3	573.0
62.5°	292.2	370.1	464.5	529.6	548.7
65°	261.6	344.5	440.2	505.3	525.7
67.5°	231.0	317.7	416.0	481.1	501.5
70°	200.3	289.7	390.5	456.8	474.7
72.5°	171.0	264.1	365.0	432.6	451.7
75°	141.6	237.3	340.7	405.8	426.2
77.5°	113.6	211.8	316.5	381.5	399.4
80°	88.0	186.3	292.2	357.3	375.2
82.5°	63.8	164.6	268.0	331.8	350.9
85°	42.1	142.9	246.3	308.8	327.9
87.5°	25.5	123.8	225.9	287.1	302.4
90°	11.5	107.2	208.0	266.7	284.6
92.5°	10.2	95.7	194.0	252.7	269.3
95°	8.9	85.5	179.9	237.3	252.7
97.5°	7.7	75.3	165.9	222.0	237.3
100°	6.4	66.4	154.4	208.0	223.3
102.5°	6.4	58.7	142.9	194.0	209.3
105°	5.1	51.0	131.4	182.5	197.8
107.5°	5.1	44.7	121.2	171.0	185.0
110°	5.1	38.3	111.0	159.5	173.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.8	31.9	102.1	148.0	162.1
115°	3.8	25.5	91.9	136.5	150.6
117.5°	3.8	19.1	82.9	126.3	139.1
120°	2.6	14.0	72.7	116.1	128.9
122.5°	2.6	8.9	65.1	104.6	117.4
125°	2.6	3.8	56.1	94.4	107.2
127.5°	2.6	1.3	47.2	84.2	95.7
130°	1.3	1.3	39.6	74.0	84.2
132.5°	1.3	1.3	30.6	63.8	75.3
135°	1.3	1.3	21.7	53.6	63.8
137.5°	1.3	0.0	14.0	43.4	52.3
140°	1.3	0.0	7.7	34.5	42.1
142.5°	1.3	0.0	1.3	24.2	33.2
145°	0.0	0.0	0.0	15.3	21.7
147.5°	0.0	0.0	0.0	6.4	12.8
150°	0.0	0.0	0.0	0.0	3.8
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)