

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: P242180

Luminaire Tested: **S121DR-S1025D940-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242180
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-S1025D940-X4F0-XX-UDD-D-W
Description: DEFINE 1 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3611.2 lumens
Efficiency: N/A
Efficacy: 87.9 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

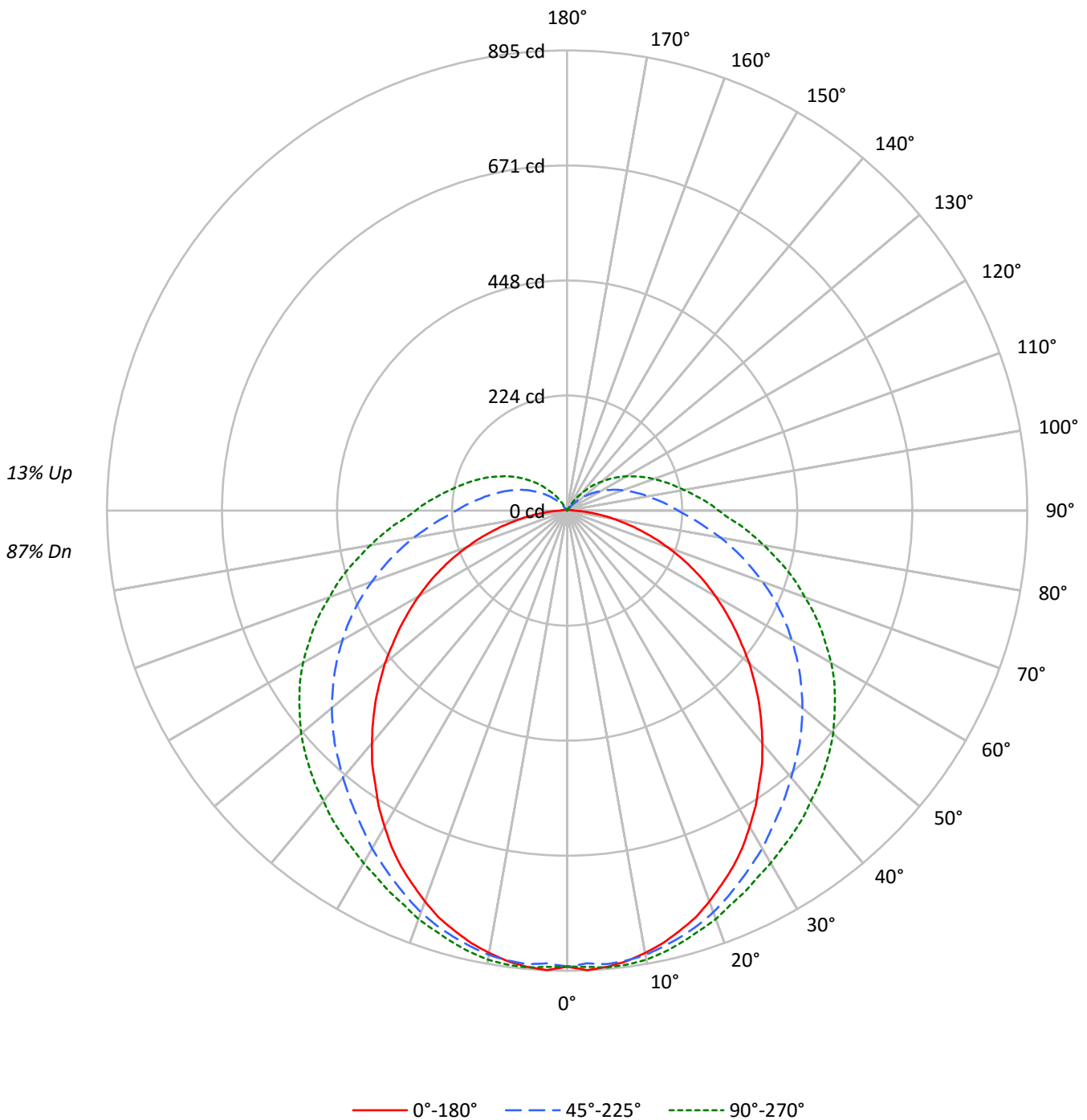
Input Watts (W): 41.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	26276	26276	26276
5°	26442	24933	24619
10°	26185	23710	23066
15°	25796	22439	21512
20°	25304	21236	20150
25°	24726	20005	18909
30°	23984	18922	17898
35°	23170	17892	17089
40°	22443	17027	16337
45°	21630	16305	15715
50°	20791	15583	15116
55°	19872	14868	14470
60°	19025	14144	13847
65°	18155	13427	13136
70°	16973	12654	12373
75°	15547	11874	11705
80°	13870	11102	10973
85°	11898	10377	10345



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.7	2.3
10°-20°	242.8	6.7
20°-30°	367.2	10.2
30°-40°	448.9	12.4
40°-50°	487.4	13.5
50°-60°	480.8	13.3
60°-70°	431.6	12.0
70°-80°	347.3	9.6
80°-90°	250.9	6.9
90°-100°	179.3	5.0
100°-110°	128.4	3.6
110°-120°	85.6	2.4
120°-130°	49.2	1.4
130°-140°	22.2	0.6
140°-150°	4.9	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	694.7	19.2
0°-40°	1143.6	31.7
0°-60°	2111.8	58.5
0°-90°	3141.6	87.0
90°-120°	393.3	10.9
90°-150°	469.6	13.0
90°-180°	470.0	13.0
0°-180°	3611.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	887	887	887	887	887	
5°	891	889	886	893	892	84
15°	846	858	858	870	868	239
25°	764	784	796	814	818	351
35°	650	686	718	753	766	408
45°	527	575	640	691	708	407
55°	396	465	552	616	636	355
65°	271	357	456	523	544	268
75°	147	246	353	420	441	156
85°	44	148	255	320	340	46
90°	12	111	215	276	295	8
95°	9	88	186	246	262	7
105°	5	53	136	189	205	6
115°	4	26	95	141	156	4
125°	3	4	58	98	111	2
135°	1	1	22	56	66	1
145°	0	0	0	16	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°	886.8	886.8	886.8	886.8	886.8
2.5°	894.7	890.7	881.5	890.7	888.1
5°	890.7	889.4	885.5	893.4	892.1
7.5°	884.1	886.8	882.8	893.4	890.7
10°	873.6	880.2	877.5	888.1	886.8
12.5°	861.7	869.6	868.3	880.2	878.9
15°	845.8	857.7	857.7	869.6	868.3
17.5°	830.0	841.8	845.8	859.0	856.4
20°	808.8	824.7	831.3	843.2	845.8
22.5°	786.3	806.2	814.1	828.6	830.0
25°	763.9	783.7	795.6	814.1	818.1
27.5°	738.8	761.2	777.1	798.2	803.5
30°	709.7	737.4	758.6	782.4	791.6
32.5°	681.9	712.3	737.4	769.2	778.4
35°	650.2	685.9	717.6	753.3	766.5
37.5°	622.5	659.5	697.8	738.8	753.3
40°	590.7	630.4	678.0	722.9	737.4
42.5°	559.0	604.0	658.1	708.4	724.2
45°	527.3	574.9	639.6	691.2	708.4
47.5°	494.3	548.5	618.5	674.0	692.5
50°	462.6	520.7	597.4	655.5	675.3
52.5°	428.2	493.0	574.9	635.7	655.5
55°	396.5	465.2	552.4	615.9	635.7
57.5°	364.8	437.4	528.6	593.4	615.9
60°	333.0	409.7	504.8	570.9	593.4
62.5°	302.6	383.3	481.1	548.5	568.3
65°	270.9	356.8	455.9	523.3	544.5
67.5°	239.2	329.1	430.8	498.2	519.4
70°	207.5	300.0	404.4	473.1	491.6
72.5°	177.1	273.6	378.0	448.0	467.8
75°	146.7	245.8	352.9	420.3	441.4
77.5°	117.6	219.4	327.8	395.2	413.7
80°	91.2	193.0	302.6	370.0	388.5
82.5°	66.1	170.5	277.5	343.6	363.4
85°	43.6	148.0	255.1	319.8	339.6
87.5°	26.4	128.2	233.9	297.4	313.2
90°	11.9	111.0	215.4	276.2	294.7
92.5°	10.6	99.1	200.9	261.7	278.9
95°	9.3	88.5	186.3	245.8	261.7
97.5°	7.9	78.0	171.8	230.0	245.8
100°	6.6	68.7	159.9	215.4	231.3
102.5°	6.6	60.8	148.0	200.9	216.7
105°	5.3	52.9	136.1	189.0	204.8
107.5°	5.3	46.3	125.6	177.1	191.6
110°	5.3	39.6	115.0	165.2	179.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4.0	33.0	105.7	153.3	167.8
115°	4.0	26.4	95.2	141.4	155.9
117.5°	4.0	19.8	85.9	130.8	144.1
120°	2.6	14.5	75.3	120.3	133.5
122.5°	2.6	9.3	67.4	108.4	121.6
125°	2.6	4.0	58.1	97.8	111.0
127.5°	2.6	1.3	48.9	87.2	99.1
130°	1.3	1.3	41.0	76.7	87.2
132.5°	1.3	1.3	31.7	66.1	78.0
135°	1.3	1.3	22.5	55.5	66.1
137.5°	1.3	0.0	14.5	44.9	54.2
140°	1.3	0.0	7.9	35.7	43.6
142.5°	1.3	0.0	1.3	25.1	34.4
145°	0.0	0.0	0.0	15.9	22.5
147.5°	0.0	0.0	0.0	6.6	13.2
150°	0.0	0.0	0.0	0.0	4.0
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)