

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: P242160

Luminaire Tested: **S121DR-S1025D835-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242160
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-S1025D835-X4F0-XX-UDD-D-W
Description: DEFINE 1 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4049.9 lumens
Efficiency: N/A
Efficacy: 98.5 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

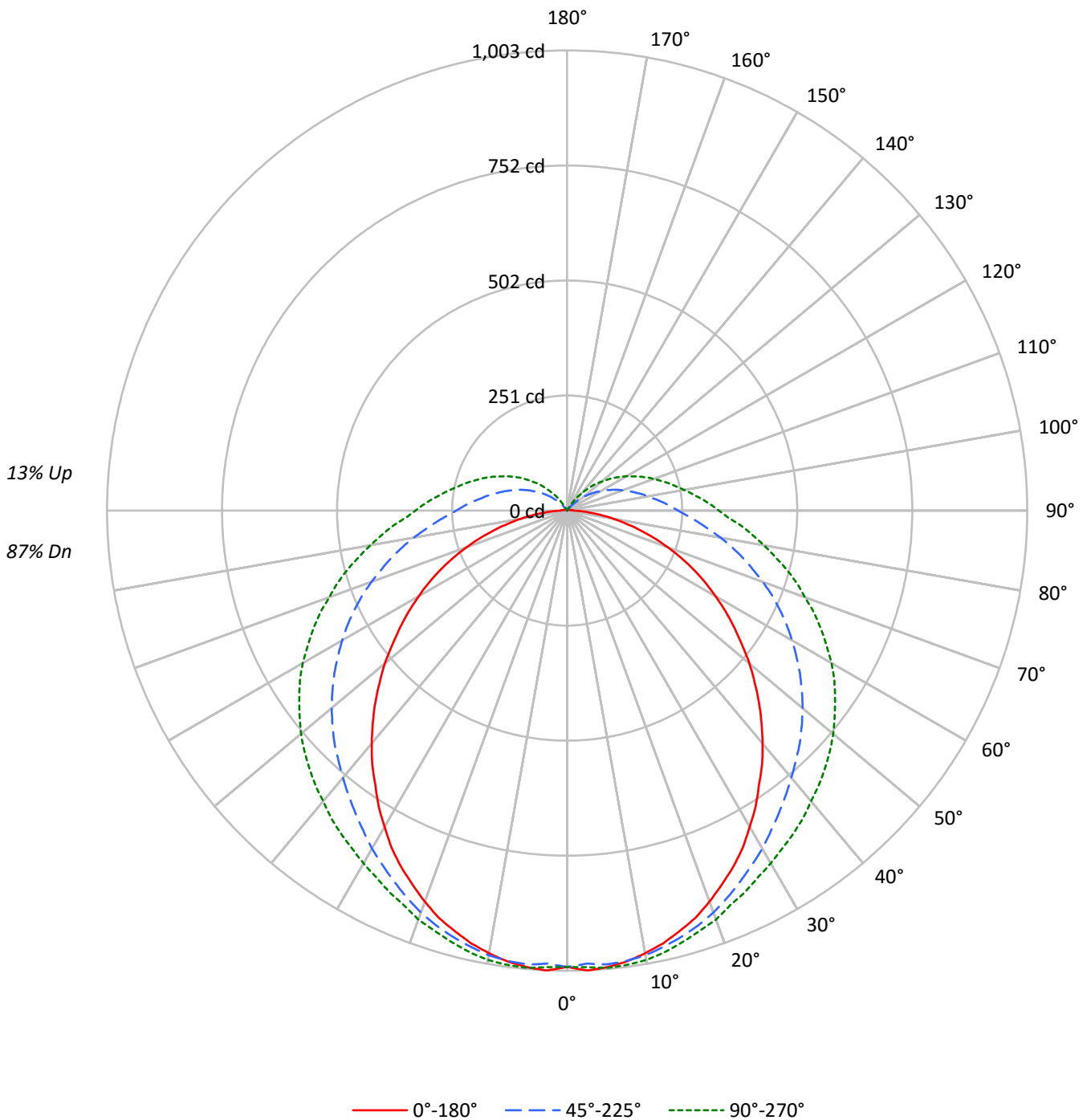
Input Watts (W): 41.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	29467	29467	29467
5°	29654	27960	27608
10°	29365	26590	25867
15°	28928	25166	24123
20°	28377	23814	22597
25°	27727	22434	21204
30°	26897	21219	20073
35°	25985	20066	19165
40°	25171	19094	18322
45°	24255	18286	17623
50°	23312	17474	16952
55°	22283	16674	16227
60°	21339	15864	15529
65°	20360	15059	14730
70°	19035	14190	13875
75°	17433	13314	13126
80°	15558	12452	12307
85°	13344	11633	11604



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.9	2.3
10°-20°	272.3	6.7
20°-30°	411.8	10.2
30°-40°	503.5	12.4
40°-50°	546.6	13.5
50°-60°	539.2	13.3
60°-70°	484.0	12.0
70°-80°	389.5	9.6
80°-90°	281.4	6.9
90°-100°	201.1	5.0
100°-110°	144.0	3.6
110°-120°	96.0	2.4
120°-130°	55.2	1.4
130°-140°	24.9	0.6
140°-150°	5.4	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	779.0	19.2
0°-40°	1282.5	31.7
0°-60°	2368.3	58.5
0°-90°	3523.2	87.0
90°-120°	441.1	10.9
90°-150°	526.6	13.0
90°-180°	527.0	13.0
0°-180°	4049.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	994	994	994	994	994	
5°	999	997	993	1002	1000	95
15°	948	962	962	975	974	267
25°	857	879	892	913	917	394
35°	729	769	805	845	860	457
45°	591	645	717	775	794	456
55°	445	522	620	691	713	398
65°	304	400	511	587	611	301
75°	164	276	396	471	495	175
85°	49	166	286	359	381	51
90°	13	124	242	310	330	9
95°	10	99	209	276	294	8
105°	6	59	153	212	230	7
115°	4	30	107	159	175	4
125°	3	4	65	110	124	3
135°	2	2	25	62	74	1
145°	0	0	0	18	25	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°	994.5	994.5	994.5	994.5	994.5
2.5°	1003.4	998.9	988.5	998.9	996.0
5°	998.9	997.4	993.0	1001.9	1000.4
7.5°	991.5	994.5	990.0	1001.9	998.9
10°	979.7	987.1	984.1	996.0	994.5
12.5°	966.3	975.2	973.7	987.1	985.6
15°	948.5	961.9	961.9	975.2	973.7
17.5°	930.7	944.1	948.5	963.3	960.4
20°	907.0	924.8	932.2	945.6	948.5
22.5°	881.8	904.1	913.0	929.3	930.7
25°	856.6	878.9	892.2	913.0	917.4
27.5°	828.5	853.7	871.5	895.2	901.1
30°	795.9	827.0	850.7	877.4	887.8
32.5°	764.8	798.8	827.0	862.6	872.9
35°	729.2	769.2	804.8	844.8	859.6
37.5°	698.1	739.6	782.5	828.5	844.8
40°	662.5	706.9	760.3	810.7	827.0
42.5°	626.9	677.3	738.1	794.4	812.2
45°	591.3	644.7	717.3	775.1	794.4
47.5°	554.3	615.1	693.6	755.9	776.6
50°	518.7	583.9	669.9	735.1	757.3
52.5°	480.2	552.8	644.7	712.9	735.1
55°	444.6	521.7	619.5	690.6	712.9
57.5°	409.1	490.6	592.8	665.5	690.6
60°	373.5	459.4	566.2	640.3	665.5
62.5°	339.4	429.8	539.5	615.1	637.3
65°	303.8	400.2	511.3	586.9	610.6
67.5°	268.3	369.0	483.2	558.7	582.5
70°	232.7	336.4	453.5	530.6	551.3
72.5°	198.6	306.8	423.9	502.4	524.7
75°	164.5	275.7	395.7	471.3	495.0
77.5°	131.9	246.0	367.6	443.1	463.9
80°	102.3	216.4	339.4	415.0	435.7
82.5°	74.1	191.2	311.2	385.3	407.6
85°	48.9	166.0	286.0	358.7	380.9
87.5°	29.6	143.8	262.3	333.5	351.3
90°	13.3	124.5	241.6	309.8	330.5
92.5°	11.9	111.2	225.3	293.5	312.7
95°	10.4	99.3	209.0	275.7	293.5
97.5°	8.9	87.4	192.7	257.9	275.7
100°	7.4	77.1	179.3	241.6	259.4
102.5°	7.4	68.2	166.0	225.3	243.1
105°	5.9	59.3	152.7	211.9	229.7
107.5°	5.9	51.9	140.8	198.6	214.9
110°	5.9	44.5	128.9	185.3	201.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4.4	37.1	118.6	171.9	188.2
115°	4.4	29.6	106.7	158.6	174.9
117.5°	4.4	22.2	96.3	146.7	161.5
120°	3.0	16.3	84.5	134.9	149.7
122.5°	3.0	10.4	75.6	121.5	136.4
125°	3.0	4.4	65.2	109.7	124.5
127.5°	3.0	1.5	54.8	97.8	111.2
130°	1.5	1.5	45.9	86.0	97.8
132.5°	1.5	1.5	35.6	74.1	87.4
135°	1.5	1.5	25.2	62.2	74.1
137.5°	1.5	0.0	16.3	50.4	60.8
140°	1.5	0.0	8.9	40.0	48.9
142.5°	1.5	0.0	1.5	28.2	38.5
145°	0.0	0.0	0.0	17.8	25.2
147.5°	0.0	0.0	0.0	7.4	14.8
150°	0.0	0.0	0.0	0.0	4.4
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)