

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: P243020

Luminaire Tested: **S121DR-H1025D835-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243020
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-H1025D835-X4F0-XX-UDD-D-W
Description: DEFINE 1 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3893.7 lumens
Efficiency: N/A
Efficacy: 103.3 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

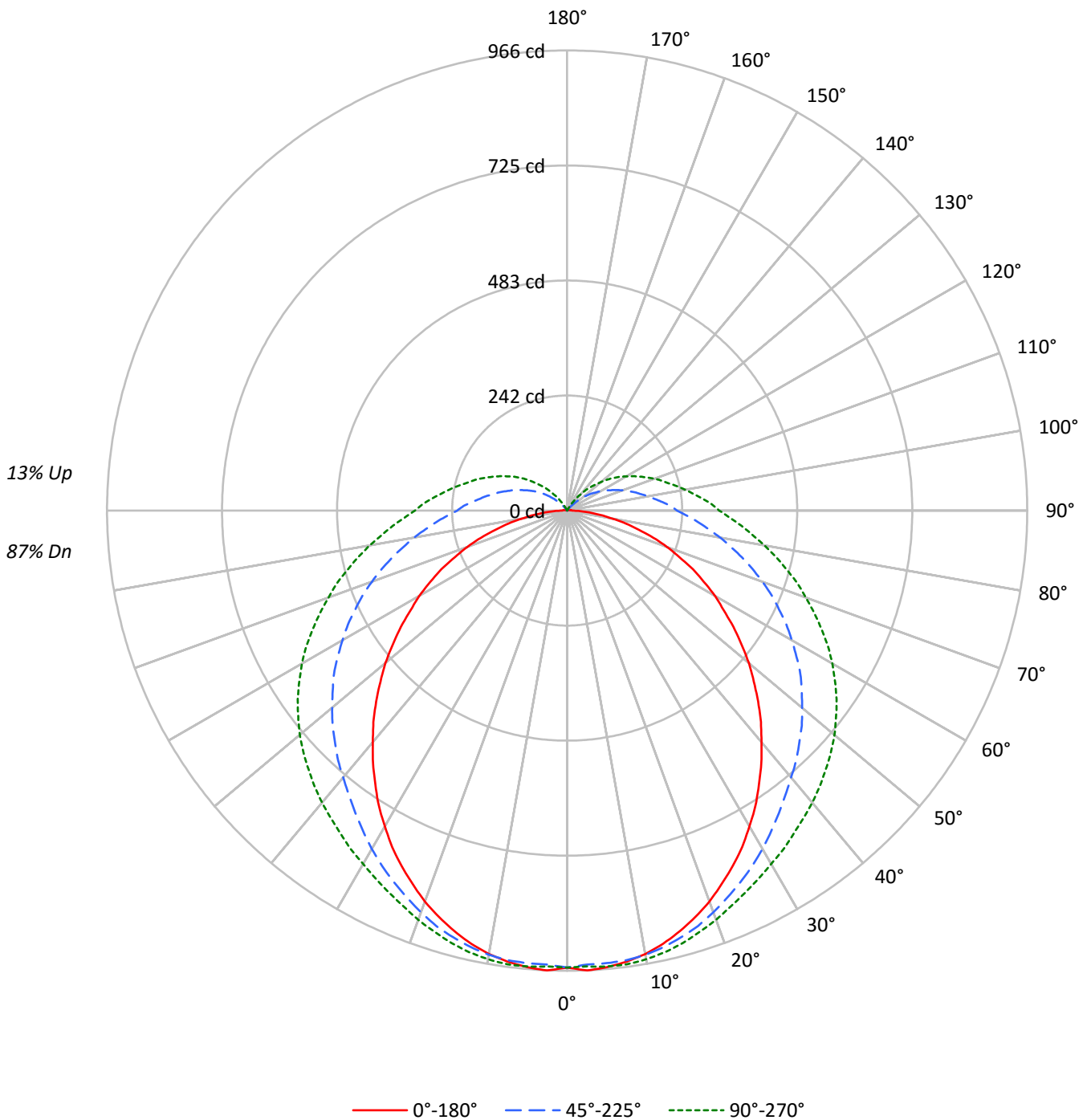
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	28424	28424	28424
5°	28562	26853	26512
10°	28331	25580	24879
15°	27885	24252	23278
20°	27329	22925	21782
25°	26636	21645	20450
30°	25859	20456	19368
35°	25012	19323	18472
40°	24103	18368	17733
45°	23255	17570	17037
50°	22378	16804	16403
55°	21361	16090	15720
60°	20493	15254	15000
65°	19516	14458	14219
70°	18176	13646	13417
75°	16543	12779	12643
80°	14539	11972	11880
85°	12662	11214	11183



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.3	2.3
10°-20°	262.2	6.7
20°-30°	396.6	10.2
30°-40°	484.7	12.4
40°-50°	526.2	13.5
50°-60°	519.3	13.3
60°-70°	465.2	11.9
70°-80°	374.2	9.6
80°-90°	270.5	6.9
90°-100°	193.7	5.0
100°-110°	138.3	3.6
110°-120°	91.5	2.4
120°-130°	52.0	1.3
130°-140°	23.3	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°	750.1	19.3
0°-40°	1234.7	31.7
0°-60°	2280.2	58.6
0°-90°	3390.0	87.1
90°-120°	423.4	10.9
90°-150°	503.7	12.9
90°-180°	504.0	12.9
0°-180°	3893.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	959	959	959	959	959	
5°	962	959	954	964	961	91
15°	914	924	927	940	940	258
25°	823	844	861	880	885	379
35°	702	738	775	816	828	439
45°	567	620	689	748	768	437
55°	426	498	598	667	691	381
65°	291	381	491	567	589	287
75°	156	263	380	454	477	167
85°	46	158	276	346	367	48
90°	11	118	231	300	319	8
95°	8	94	201	266	286	6
105°	4	56	148	204	221	5
115°	3	27	101	153	169	2
125°	1	3	62	106	120	1
135°	0	0	24	59	70	0
145°	0	0	0	16	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°	959.3	959.3	959.3	959.3	959.3
2.5°	966.3	960.7	953.7	960.7	957.9
5°	962.1	959.3	953.7	963.5	960.7
7.5°	955.1	955.1	952.3	962.1	960.7
10°	945.2	948.1	946.7	957.9	956.5
12.5°	931.2	936.8	938.2	950.9	949.5
15°	914.3	924.1	927.0	939.6	939.6
17.5°	894.6	907.3	914.3	927.0	927.0
20°	873.5	887.6	897.4	912.9	914.3
22.5°	848.2	867.9	879.1	897.4	898.8
25°	822.9	844.0	860.8	880.5	884.8
27.5°	796.1	820.1	841.2	863.7	870.7
30°	765.2	791.9	820.1	846.8	856.6
32.5°	735.7	766.6	797.6	831.3	844.0
35°	701.9	738.5	775.0	815.8	828.5
37.5°	669.5	708.9	752.5	799.0	814.4
40°	634.4	679.4	731.4	783.5	800.4
42.5°	602.0	648.5	711.7	765.2	784.9
45°	566.9	620.3	689.2	748.3	768.0
47.5°	531.7	589.4	668.1	728.6	751.1
50°	497.9	558.4	644.2	710.3	732.8
52.5°	461.4	530.3	620.3	687.8	711.7
55°	426.2	497.9	597.8	666.7	690.6
57.5°	389.6	471.2	571.1	644.2	666.7
60°	358.7	440.3	544.4	618.9	642.8
62.5°	323.5	410.7	519.0	592.2	617.5
65°	291.2	381.2	490.9	566.9	589.4
67.5°	254.6	351.7	464.2	538.7	561.2
70°	222.2	322.1	436.1	510.6	533.1
72.5°	189.9	294.0	407.9	483.9	506.4
75°	156.1	263.0	379.8	454.3	476.8
77.5°	126.6	234.9	351.7	426.2	448.7
80°	95.6	206.8	326.3	399.5	420.6
82.5°	70.3	181.5	299.6	372.8	392.4
85°	46.4	157.5	275.7	346.0	367.1
87.5°	26.7	136.4	251.8	322.1	341.8
90°	11.3	118.2	230.7	299.6	319.3
92.5°	8.4	106.9	218.0	284.1	303.8
95°	8.4	94.2	201.1	265.9	285.5
97.5°	7.0	83.0	185.7	249.0	267.3
100°	5.6	73.1	173.0	233.5	251.8
102.5°	5.6	64.7	158.9	218.0	236.3
105°	4.2	56.3	147.7	204.0	220.8
107.5°	4.2	47.8	135.0	191.3	208.2
110°	2.8	40.8	123.8	178.6	195.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.8	33.8	112.5	166.0	181.5
115°	2.8	26.7	101.3	153.3	168.8
117.5°	1.4	19.7	91.4	140.7	156.1
120°	1.4	14.1	81.6	128.0	143.5
122.5°	1.4	7.0	70.3	116.7	132.2
125°	1.4	2.8	61.9	105.5	119.6
127.5°	0.0	0.0	52.0	92.8	106.9
130°	0.0	0.0	42.2	81.6	94.2
132.5°	0.0	0.0	33.8	70.3	81.6
135°	0.0	0.0	23.9	59.1	70.3
137.5°	0.0	0.0	15.5	47.8	59.1
140°	0.0	0.0	7.0	36.6	46.4
142.5°	0.0	0.0	1.4	26.7	35.2
145°	0.0	0.0	0.0	15.5	25.3
147.5°	0.0	0.0	0.0	5.6	14.1
150°	0.0	0.0	0.0	0.0	4.2
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)