

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: P243040

Luminaire Tested: **S121DR-H1025D940-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243040
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-H1025D940-X4F0-XX-UDD-D-W
Description: DEFINE 1 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3472.1 lumens
Efficiency: N/A
Efficacy: 92.1 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

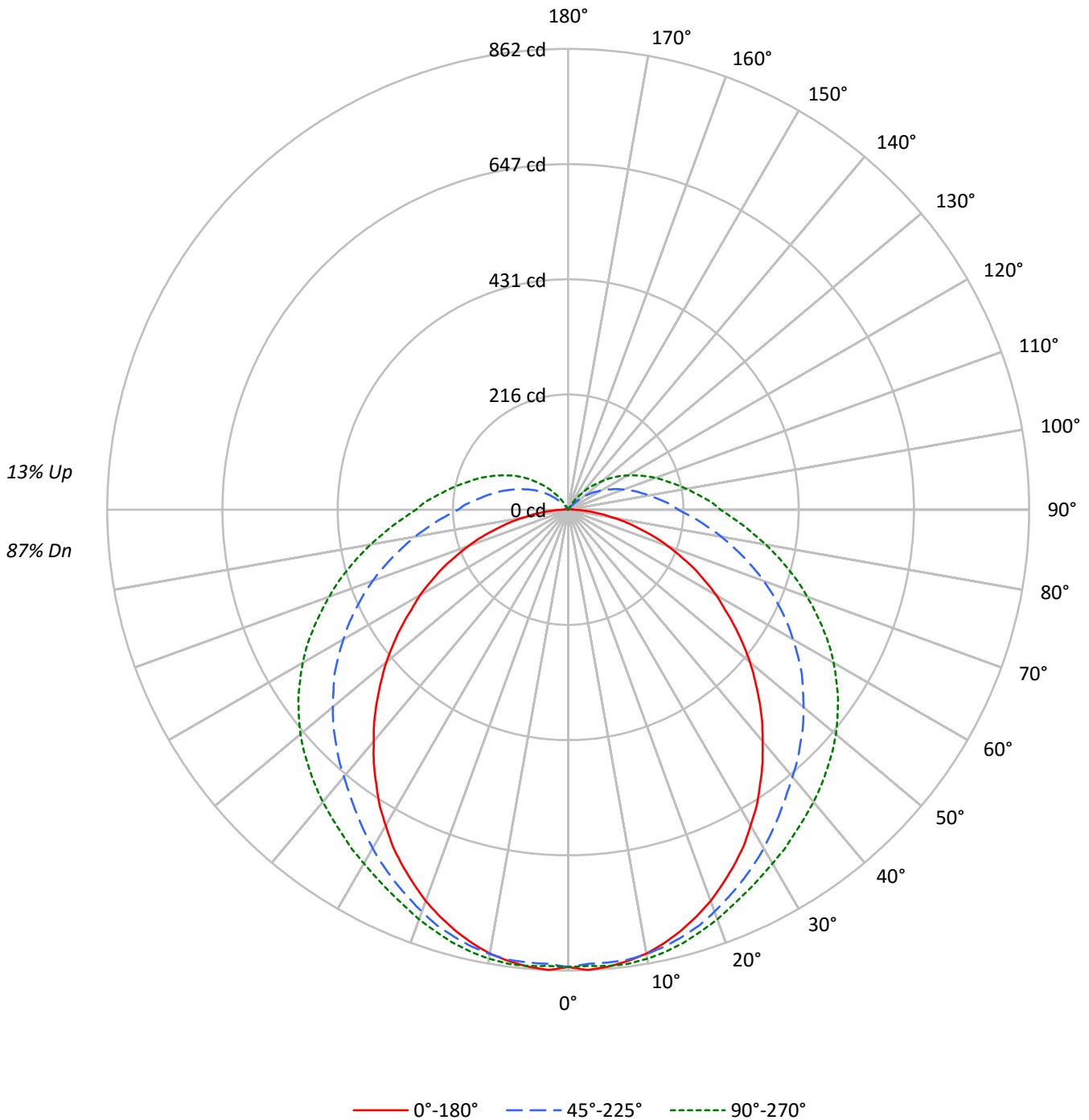
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	25345	25345	25345
5°	25469	23945	23642
10°	25264	22807	22184
15°	24866	21626	20759
20°	24369	20442	19424
25°	23752	19301	18236
30°	23058	18241	17272
35°	22304	17231	16472
40°	21493	16379	15812
45°	20736	15668	15192
50°	19955	14986	14628
55°	19050	14348	14019
60°	18271	13601	13375
65°	17398	12891	12677
70°	16212	12166	11965
75°	14752	11396	11275
80°	12973	10677	10592
85°	11298	9998	9974



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.4	2.3
10°-20°	233.8	6.7
20°-30°	353.6	10.2
30°-40°	432.2	12.4
40°-50°	469.2	13.5
50°-60°	463.0	13.3
60°-70°	414.8	11.9
70°-80°	333.7	9.6
80°-90°	241.2	6.9
90°-100°	172.7	5.0
100°-110°	123.3	3.6
110°-120°	81.6	2.3
120°-130°	46.4	1.3
130°-140°	20.7	0.6
140°-150°	4.4	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	668.8	19.3
0°-40°	1101.0	31.7
0°-60°	2033.3	58.6
0°-90°	3022.9	87.1
90°-120°	377.6	10.9
90°-150°	449.1	12.9
90°-180°	449.0	12.9
0°-180°	3472.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	855	855	855	855	855	
5°	858	855	850	859	857	81
15°	815	824	827	838	838	230
25°	734	753	768	785	789	338
35°	626	658	691	728	739	392
45°	506	553	615	667	685	390
55°	380	444	533	594	616	340
65°	260	340	438	506	526	256
75°	139	235	339	405	425	149
85°	41	140	246	309	327	43
90°	10	105	206	267	285	7
95°	8	84	179	237	255	5
105°	4	50	132	182	197	4
115°	2	24	90	137	150	2
125°	1	2	55	94	107	1
135°	0	0	21	53	63	0
145°	0	0	0	14	23	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°	855.4	855.4	855.4	855.4	855.4
2.5°	861.7	856.7	850.4	856.7	854.2
5°	857.9	855.4	850.4	859.2	856.7
7.5°	851.7	851.7	849.2	857.9	856.7
10°	842.9	845.4	844.1	854.2	852.9
12.5°	830.3	835.4	836.6	847.9	846.6
15°	815.3	824.1	826.6	837.9	837.9
17.5°	797.7	809.0	815.3	826.6	826.6
20°	778.9	791.5	800.2	814.0	815.3
22.5°	756.3	773.9	783.9	800.2	801.5
25°	733.8	752.6	767.6	785.2	789.0
27.5°	709.9	731.3	750.1	770.1	776.4
30°	682.3	706.2	731.3	755.1	763.9
32.5°	656.0	683.6	711.2	741.3	752.6
35°	625.9	658.5	691.1	727.5	738.8
37.5°	597.0	632.2	671.0	712.4	726.2
40°	565.7	605.8	652.2	698.6	713.7
42.5°	536.8	578.2	634.7	682.3	699.9
45°	505.5	553.1	614.6	667.3	684.8
47.5°	474.1	525.5	595.8	649.7	669.8
50°	444.0	498.0	574.5	633.4	653.5
52.5°	411.4	472.9	553.1	613.4	634.7
55°	380.1	444.0	533.1	594.5	615.9
57.5°	347.4	420.2	509.2	574.5	594.5
60°	319.8	392.6	485.4	551.9	573.2
62.5°	288.5	366.3	462.8	528.1	550.6
65°	259.6	339.9	437.7	505.5	525.5
67.5°	227.0	313.6	413.9	480.4	500.5
70°	198.2	287.2	388.8	455.3	475.4
72.5°	169.3	262.1	363.7	431.5	451.5
75°	139.2	234.6	338.7	405.1	425.2
77.5°	112.9	209.5	313.6	380.1	400.1
80°	85.3	184.4	291.0	356.2	375.0
82.5°	62.7	161.8	267.2	332.4	349.9
85°	41.4	140.5	245.8	308.6	327.4
87.5°	23.8	121.7	224.5	287.2	304.8
90°	10.0	105.4	205.7	267.2	284.7
92.5°	7.5	95.3	194.4	253.4	270.9
95°	7.5	84.0	179.4	237.1	254.6
97.5°	6.3	74.0	165.6	222.0	238.3
100°	5.0	65.2	154.3	208.2	224.5
102.5°	5.0	57.7	141.7	194.4	210.7
105°	3.8	50.2	131.7	181.9	196.9
107.5°	3.8	42.6	120.4	170.6	185.6
110°	2.5	36.4	110.4	159.3	174.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.5	30.1	100.3	148.0	161.8
115°	2.5	23.8	90.3	136.7	150.5
117.5°	1.3	17.6	81.5	125.4	139.2
120°	1.3	12.5	72.7	114.1	127.9
122.5°	1.3	6.3	62.7	104.1	117.9
125°	1.3	2.5	55.2	94.1	106.6
127.5°	0.0	0.0	46.4	82.8	95.3
130°	0.0	0.0	37.6	72.7	84.0
132.5°	0.0	0.0	30.1	62.7	72.7
135°	0.0	0.0	21.3	52.7	62.7
137.5°	0.0	0.0	13.8	42.6	52.7
140°	0.0	0.0	6.3	32.6	41.4
142.5°	0.0	0.0	1.3	23.8	31.4
145°	0.0	0.0	0.0	13.8	22.6
147.5°	0.0	0.0	0.0	5.0	12.5
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)