

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: P242492

Luminaire Tested: **S123DR-S560D927-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242492
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-15)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DR-S560D927-X4F0-XX-UDD-D-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1754.9 lumens
Efficiency: N/A
Efficacy: 93.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.23' x L: 3.88' x H: 0.08')
CIE Type: Direct

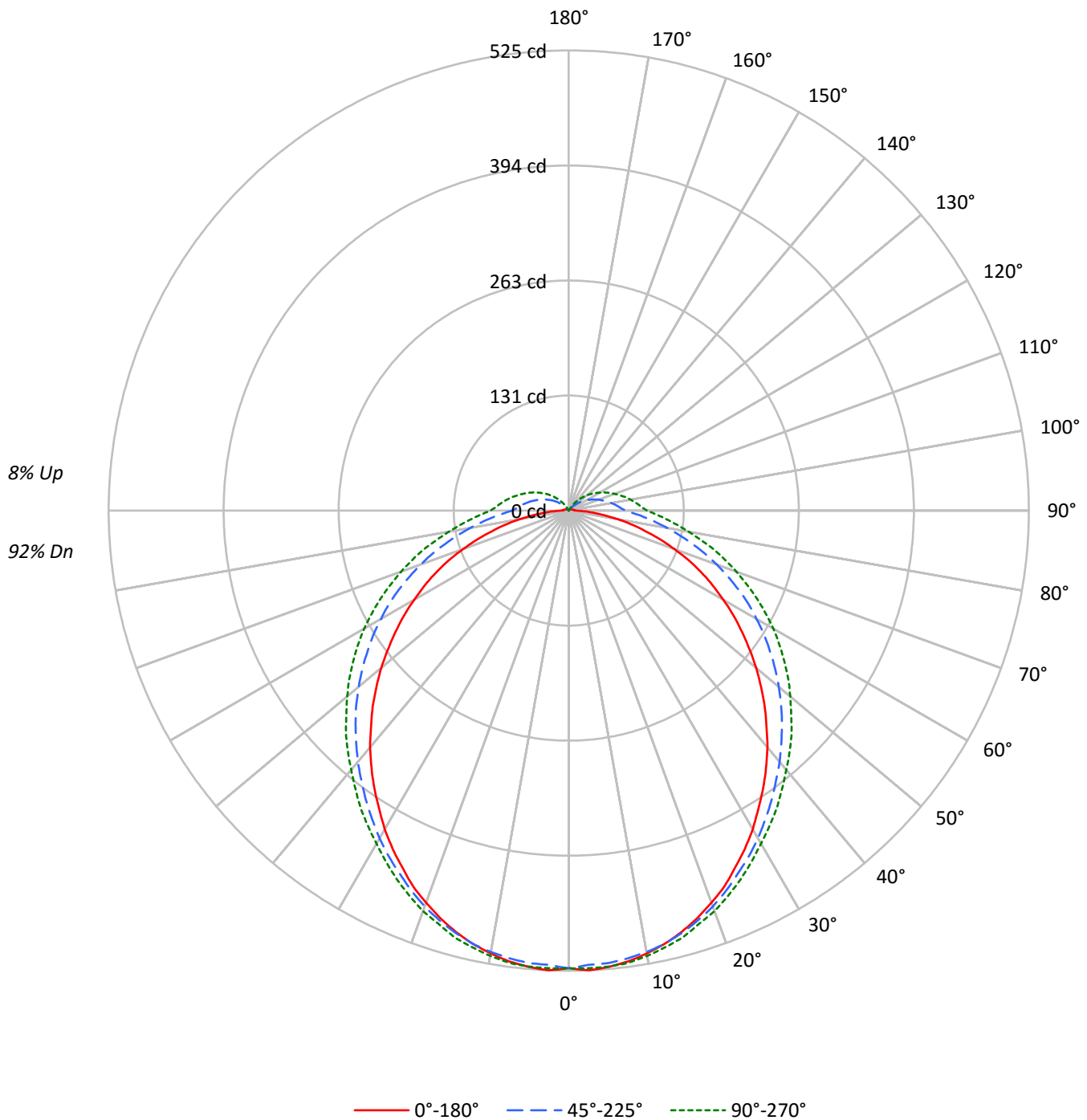
Input Watts (W): 18.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	117	117	117	117	113	113	113	113	106	106	106	100	100	100	94	94	94
1	105	100	95	90	102	97	92	88	91	87	84	85	82	80	80	78	76
2	95	86	79	72	92	83	77	71	79	73	68	74	69	65	70	66	63
3	86	75	67	60	83	73	65	59	69	62	56	65	59	54	61	56	52
4	79	66	57	50	76	64	56	49	61	54	48	57	51	46	54	49	45
5	72	59	50	43	70	58	49	42	54	47	41	52	45	40	49	43	39
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	44	38	34
7	62	48	39	33	60	47	38	32	45	37	32	42	36	31	40	35	30
8	58	44	35	29	56	43	35	29	41	33	28	39	32	28	37	31	27
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	28	24
10	50	37	29	24	49	36	29	24	35	28	23	33	27	23	32	26	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6330	6330	6330
5°	6348	6158	6158
10°	6291	6006	5967
15°	6210	5834	5763
20°	6094	5640	5540
25°	5951	5421	5307
30°	5804	5221	5074
35°	5639	5012	4884
40°	5482	4821	4682
45°	5308	4636	4519
50°	5135	4453	4340
55°	4945	4266	4177
60°	4759	4075	4010
65°	4570	3873	3813
70°	4283	3643	3610
75°	3919	3382	3402
80°	3503	3122	3164
85°	3115	2925	3007

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.5	2.8
10°-20°	141.2	8.0
20°-30°	211.2	12.0
30°-40°	252.1	14.4
40°-50°	263.8	15.0
50°-60°	247.5	14.1
60°-70°	206.8	11.8
70°-80°	147.8	8.4
80°-90°	88.0	5.0
90°-100°	55.3	3.2
100°-110°	40.6	2.3
110°-120°	27.1	1.5
120°-130°	15.5	0.9
130°-140°	6.9	0.4
140°-150°	1.5	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	401.9	22.9
0°-40°	654.0	37.3
0°-60°	1165.4	66.4
0°-90°	1607.9	91.6
90°-120°	123.1	7.0
90°-150°	146.9	8.4
90°-180°	147.0	8.4
0°-180°	1754.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	522	522	522	522	522	
5°	523	522	518	523	522	50
15°	498	499	499	504	504	140
25°	449	455	457	464	464	207
35°	387	396	403	412	414	242
45°	316	330	344	355	360	244
55°	241	260	280	296	300	216
65°	167	189	214	231	237	165
75°	90	117	146	164	171	97
85°	28	56	86	106	112	29
90°	7	35	64	84	89	5
95°	6	28	56	74	80	5
105°	5	18	43	59	64	5
115°	3	10	30	44	48	3
125°	2	2	18	30	34	2
135°	1	1	7	17	20	1
145°	1	0	0	5	7	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°	522.2	522.2	522.2	522.2	522.2
2.5°	525.0	523.3	518.8	523.3	522.7
5°	522.7	521.6	518.2	522.7	522.2
7.5°	518.8	518.8	515.3	521.0	520.5
10°	513.1	514.2	511.4	517.0	515.9
12.5°	506.2	507.9	506.2	511.4	510.2
15°	497.7	499.4	498.8	504.5	504.0
17.5°	487.5	490.9	490.3	495.4	494.3
20°	476.1	479.5	480.6	485.8	486.3
22.5°	464.1	467.6	469.3	476.1	475.5
25°	449.4	455.0	456.8	464.1	464.1
27.5°	435.1	441.4	444.8	451.1	451.6
30°	419.8	427.2	431.7	438.6	438.6
32.5°	402.7	411.2	417.5	424.9	426.6
35°	386.8	395.9	403.3	411.8	414.1
37.5°	369.7	380.0	388.5	398.2	399.9
40°	352.7	362.9	374.3	383.9	386.2
42.5°	333.9	347.0	358.9	369.7	373.1
45°	316.3	329.9	344.1	354.9	359.5
47.5°	297.5	312.8	328.8	340.7	344.1
50°	279.3	295.2	312.8	325.9	329.9
52.5°	259.9	277.0	296.9	310.6	315.7
55°	241.2	259.9	280.4	295.8	300.3
57.5°	223.0	242.3	264.5	279.9	285.0
60°	203.6	224.1	247.4	263.4	269.6
62.5°	185.4	206.5	231.5	247.4	253.1
65°	166.7	188.8	213.9	230.9	236.6
67.5°	147.9	171.2	196.2	215.0	219.6
70°	128.0	152.4	179.7	197.9	203.6
72.5°	109.8	134.2	162.7	181.4	187.1
75°	90.4	117.2	145.6	164.4	171.2
77.5°	73.9	100.7	129.1	149.0	154.1
80°	56.3	84.2	113.8	133.1	138.8
82.5°	41.0	69.4	99.5	118.9	124.6
85°	27.9	56.3	86.5	105.8	111.5
87.5°	17.1	45.5	74.5	93.9	99.5
90°	7.4	35.3	64.3	83.6	89.3
92.5°	6.8	31.3	59.7	78.5	83.6
95°	6.3	28.4	56.3	73.9	79.6
97.5°	5.7	26.2	52.9	70.0	75.7
100°	5.1	23.3	49.5	66.0	71.7
102.5°	4.6	20.5	46.1	62.0	67.7
105°	4.6	18.2	42.7	58.6	63.7
107.5°	4.0	15.9	39.2	54.6	59.7
110°	3.4	13.7	36.4	51.2	55.7

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.4	11.4	33.0	47.2	52.3
115°	2.8	9.7	30.1	43.8	48.3
117.5°	2.8	7.4	26.7	40.4	44.9
120°	2.3	5.1	23.9	37.0	41.0
122.5°	2.3	3.4	21.0	33.6	37.5
125°	1.7	1.7	18.2	30.1	34.1
127.5°	1.7	1.1	15.4	26.7	30.7
130°	1.7	1.1	12.5	23.3	26.7
132.5°	1.1	1.1	9.7	19.9	23.9
135°	1.1	0.6	6.8	17.1	19.9
137.5°	1.1	0.6	4.6	13.7	16.5
140°	0.6	0.6	2.3	10.8	13.7
142.5°	0.6	0.0	0.0	7.4	10.2
145°	0.6	0.0	0.0	4.6	6.8
147.5°	0.0	0.0	0.0	1.7	4.0
150°	0.0	0.0	0.0	0.0	1.1
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)