

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: P242674

Luminaire Tested: **S124DR-S575D835-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242674
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-16)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DR-S575D835-X4F0-XX-UDD-D-W
Description: DEFINE 4 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: 2186.1 lumens
Efficiency: N/A
Efficacy: 116.3 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.88' x H: 0.08')
CIE Type: Direct

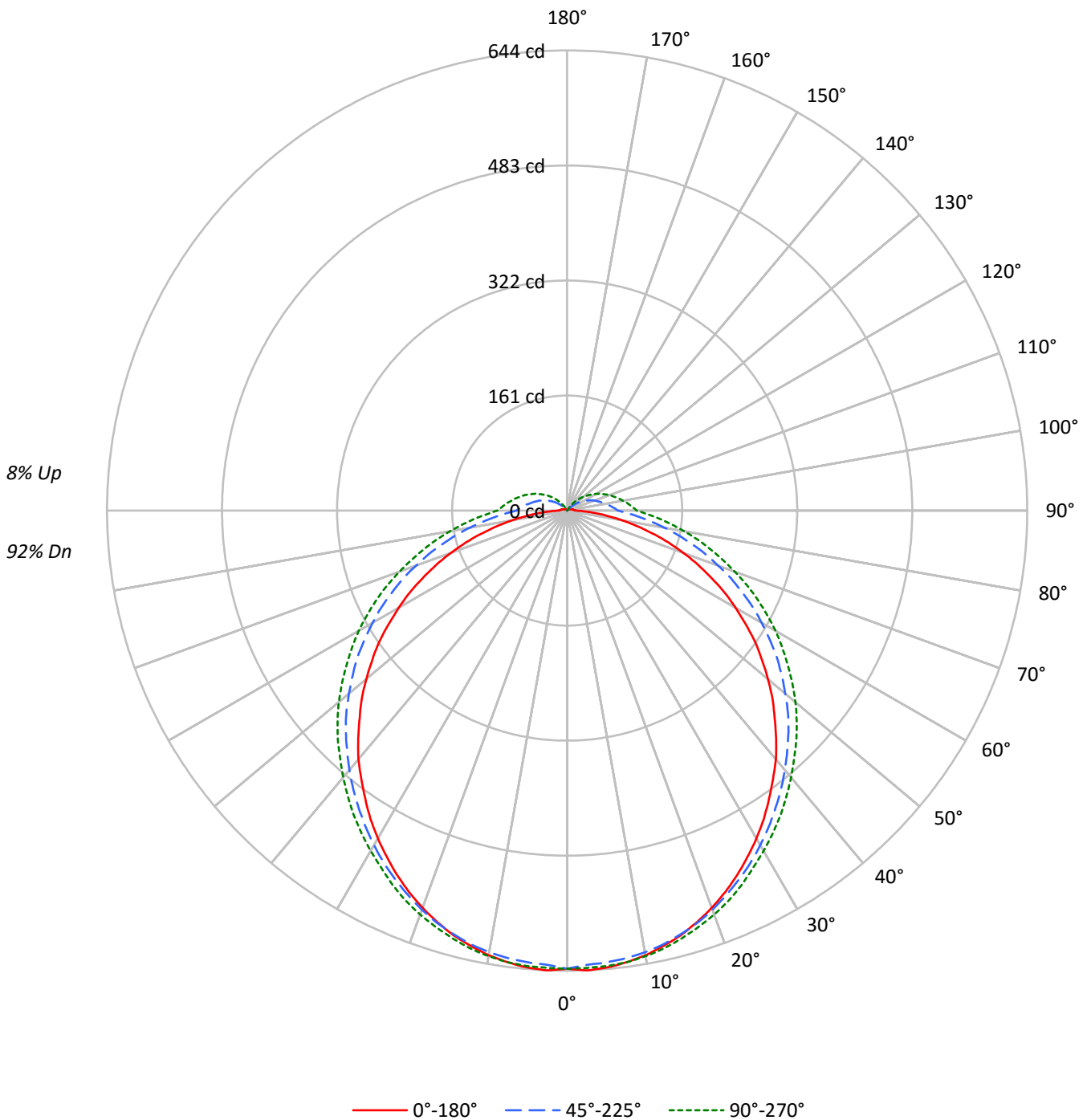
Input Watts (W): 18.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	117	117	117	117	114	114	114	114	107	107	107	101	101	101	95	95	95	92
1	105	100	95	91	102	97	93	89	91	88	84	86	83	80	81	79	77	74
2	95	86	79	73	92	84	77	71	79	73	68	74	70	66	70	67	63	60
3	87	75	67	60	83	73	65	59	69	62	57	65	60	55	62	57	53	50
4	79	66	57	50	76	65	56	49	61	54	48	58	52	47	55	49	45	43
5	73	59	50	43	70	58	49	42	55	47	41	52	45	40	49	44	39	37
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	45	39	34	32
7	62	48	39	33	60	47	38	32	45	37	32	43	36	31	41	35	30	28
8	58	44	35	29	56	43	35	29	41	33	28	39	32	28	37	31	27	25
9	54	40	32	26	52	39	31	26	38	30	25	36	29	25	34	29	24	22
10	50	37	29	24	49	36	29	23	35	28	23	33	27	23	32	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5700	5700	5700
5°	5717	5564	5579
10°	5682	5468	5459
15°	5630	5357	5322
20°	5554	5235	5188
25°	5466	5100	5042
30°	5372	4966	4892
35°	5266	4828	4760
40°	5180	4696	4622
45°	5054	4574	4504
50°	4947	4434	4378
55°	4837	4301	4231
60°	4664	4133	4096
65°	4476	3952	3930
70°	4245	3744	3738
75°	3926	3515	3560
80°	3572	3291	3380
85°	3119	3079	3255



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.8	2.8
10°-20°	174.1	8.0
20°-30°	263.2	12.0
30°-40°	318.4	14.6
40°-50°	336.6	15.4
50°-60°	316.8	14.5
60°-70°	262.9	12.0
70°-80°	184.5	8.4
80°-90°	104.0	4.8
90°-100°	61.9	2.8
100°-110°	45.9	2.1
110°-120°	30.8	1.4
120°-130°	17.3	0.8
130°-140°	7.5	0.3
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°	498.0	22.8
0°-40°	816.4	37.3
0°-60°	1469.9	67.2
0°-90°	2021.3	92.5
90°-120°	138.5	6.3
90°-150°	164.8	7.5
90°-180°	165.0	7.5
0°-180°	2186.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	641	641	641	641	641	
5°	642	640	635	640	640	61
15°	615	616	614	620	620	173
25°	563	567	569	577	578	259
35°	493	501	508	518	521	308
45°	411	424	438	450	454	317
55°	322	337	358	373	377	287
65°	223	246	270	288	294	221
75°	124	150	180	200	207	131
85°	38	68	100	122	129	40
90°	12	40	71	92	98	8
95°	9	33	62	82	88	7
105°	6	21	47	65	71	7
115°	4	11	34	50	55	5
125°	3	2	20	34	38	3
135°	1	1	6	18	22	1
145°	1	0	0	4	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°	641.2	641.2	641.2	641.2	641.2
2.5°	644.1	641.9	636.2	641.2	640.5
5°	641.9	639.8	634.7	640.5	639.8
7.5°	637.6	636.2	631.9	638.3	637.6
10°	631.9	631.1	627.6	634.0	633.3
12.5°	624.0	624.0	621.8	627.6	627.6
15°	615.3	616.1	613.9	620.4	619.7
17.5°	603.9	606.0	605.3	611.8	611.0
20°	591.7	593.8	594.5	601.7	601.7
22.5°	578.0	580.9	582.3	589.5	590.9
25°	562.9	567.2	569.4	577.3	578.0
27.5°	546.4	552.9	555.8	562.9	563.6
30°	529.9	535.6	540.7	548.6	550.0
32.5°	512.0	519.1	524.9	534.2	535.6
35°	492.6	501.2	508.4	518.4	520.6
37.5°	473.2	483.2	491.8	501.9	504.1
40°	454.5	463.8	473.9	484.7	487.5
42.5°	433.0	443.7	455.9	468.2	470.3
45°	410.7	424.4	438.0	450.2	453.8
47.5°	389.9	403.5	419.3	431.5	435.8
50°	366.9	382.7	398.5	412.9	417.2
52.5°	343.9	359.7	378.4	392.8	397.1
55°	321.7	336.8	358.3	372.7	377.0
57.5°	296.5	315.2	336.0	353.3	356.9
60°	272.1	290.8	314.5	331.0	336.8
62.5°	248.4	269.3	293.0	309.5	315.2
65°	222.6	245.6	270.0	287.9	293.7
67.5°	198.2	222.6	248.4	266.4	272.1
70°	173.0	197.5	224.7	244.1	249.2
72.5°	148.6	173.8	203.2	221.9	227.6
75°	123.5	150.1	180.2	200.3	206.8
77.5°	99.8	127.8	159.4	179.5	186.7
80°	78.3	107.0	138.6	160.1	165.9
82.5°	56.7	86.9	118.5	140.7	147.2
85°	38.1	68.2	100.5	122.1	129.2
87.5°	23.7	53.1	84.7	105.5	112.0
90°	11.5	40.2	71.1	91.9	97.7
92.5°	10.8	35.9	66.8	86.9	92.6
95°	9.3	33.0	62.5	81.9	88.3
97.5°	8.6	29.4	58.9	77.5	84.0
100°	7.9	26.6	54.6	74.0	79.0
102.5°	7.9	23.7	51.0	69.6	75.4
105°	6.5	20.8	47.4	65.3	71.1
107.5°	6.5	18.7	43.8	61.8	66.8
110°	5.7	15.8	40.9	57.4	63.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	5.0	13.6	37.3	53.1	58.9
115°	4.3	10.8	33.7	49.5	54.6
117.5°	4.3	8.6	30.2	45.2	51.0
120°	3.6	5.7	26.6	40.9	46.7
122.5°	3.6	3.6	23.0	37.3	42.4
125°	2.9	2.2	20.1	33.7	38.1
127.5°	2.9	2.2	16.5	29.4	34.5
130°	2.2	1.4	12.9	25.8	30.2
132.5°	2.2	1.4	10.1	22.3	26.6
135°	1.4	1.4	6.5	18.0	22.3
137.5°	1.4	0.7	3.6	14.4	18.0
140°	1.4	0.7	1.4	10.8	14.4
142.5°	0.7	0.7	0.0	7.9	10.8
145°	0.7	0.0	0.0	4.3	7.2
147.5°	0.7	0.0	0.0	0.7	3.6
150°	0.7	0.0	0.0	0.0	0.0
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)