

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: P242673

Luminaire Tested: **S124DR-S350D835-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242673
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-S350D835-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: 1329.3 lumens
Efficiency: N/A
Efficacy: 114.6 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

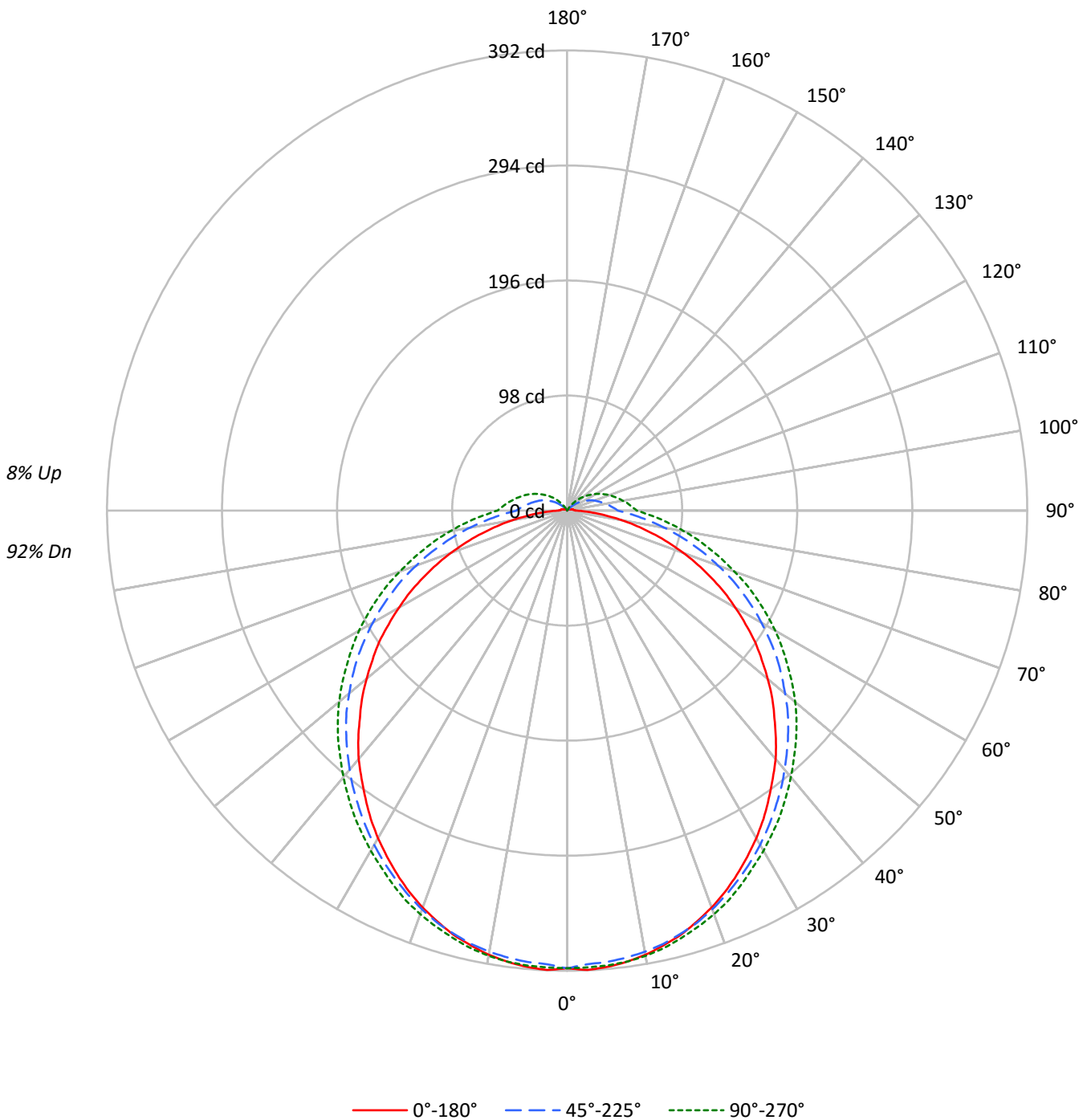
Input Watts (W): 11.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3466	3466	3466
5°	3476	3384	3392
10°	3455	3325	3320
15°	3424	3257	3236
20°	3377	3183	3155
25°	3324	3101	3066
30°	3267	3020	2975
35°	3202	2935	2895
40°	3150	2856	2811
45°	3073	2781	2738
50°	3008	2696	2662
55°	2941	2616	2572
60°	2837	2512	2491
65°	2722	2403	2390
70°	2582	2278	2272
75°	2388	2138	2164
80°	2172	2002	2056
85°	1891	1872	1980



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.9	2.8
10°-20°	105.8	8.0
20°-30°	160.0	12.0
30°-40°	193.6	14.6
40°-50°	204.7	15.4
50°-60°	192.6	14.5
60°-70°	159.9	12.0
70°-80°	112.2	8.4
80°-90°	63.2	4.8
90°-100°	37.7	2.8
100°-110°	27.9	2.1
110°-120°	18.7	1.4
120°-130°	10.5	0.8
130°-140°	4.6	0.3
140°-150°	0.9	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	302.8	22.8
0°-40°	496.5	37.3
0°-60°	893.8	67.2
0°-90°	1229.1	92.5
90°-120°	84.2	6.3
90°-150°	100.2	7.5
90°-180°	100.0	7.5
0°-180°	1329.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	390	390	390	390	390	
5°	390	389	386	390	389	37
15°	374	375	373	377	377	105
25°	342	345	346	351	352	158
35°	300	305	309	315	317	188
45°	250	258	266	274	276	193
55°	196	205	218	227	229	174
65°	135	149	164	175	179	134
75°	75	91	110	122	126	80
85°	23	42	61	74	79	24
90°	7	24	43	56	59	5
95°	6	20	38	50	54	5
105°	4	13	29	40	43	4
115°	3	6	20	30	33	3
125°	2	1	12	20	23	2
135°	1	1	4	11	14	1
145°	0	0	0	3	4	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°	389.9	389.9	389.9	389.9	389.9
2.5°	391.7	390.3	386.8	389.9	389.5
5°	390.3	389.0	386.0	389.5	389.0
7.5°	387.7	386.8	384.2	388.2	387.7
10°	384.2	383.8	381.6	385.5	385.1
12.5°	379.4	379.4	378.1	381.6	381.6
15°	374.2	374.6	373.3	377.2	376.8
17.5°	367.2	368.5	368.1	372.0	371.6
20°	359.8	361.1	361.5	365.9	365.9
22.5°	351.5	353.2	354.1	358.5	359.3
25°	342.3	344.9	346.2	351.0	351.5
27.5°	332.3	336.2	337.9	342.3	342.7
30°	322.2	325.7	328.8	333.6	334.5
32.5°	311.3	315.7	319.2	324.8	325.7
35°	299.5	304.8	309.1	315.2	316.6
37.5°	287.7	293.8	299.1	305.2	306.5
40°	276.4	282.1	288.2	294.7	296.5
42.5°	263.3	269.8	277.3	284.7	286.0
45°	249.7	258.0	266.3	273.8	275.9
47.5°	237.1	245.4	255.0	262.4	265.0
50°	223.1	232.7	242.3	251.1	253.7
52.5°	209.1	218.7	230.1	238.8	241.5
55°	195.6	204.8	217.9	226.6	229.2
57.5°	180.3	191.7	204.3	214.8	217.0
60°	165.5	176.8	191.2	201.3	204.8
62.5°	151.1	163.7	178.1	188.2	191.7
65°	135.4	149.3	164.2	175.1	178.6
67.5°	120.5	135.4	151.1	162.0	165.5
70°	105.2	120.1	136.7	148.5	151.5
72.5°	90.4	105.7	123.6	134.9	138.4
75°	75.1	91.3	109.6	121.8	125.7
77.5°	60.7	77.7	96.9	109.2	113.5
80°	47.6	65.1	84.3	97.4	100.9
82.5°	34.5	52.8	72.0	85.6	89.5
85°	23.1	41.5	61.1	74.2	78.6
87.5°	14.4	32.3	51.5	64.2	68.1
90°	7.0	24.5	43.2	55.9	59.4
92.5°	6.5	21.8	40.6	52.8	56.3
95°	5.7	20.1	38.0	49.8	53.7
97.5°	5.2	17.9	35.8	47.2	51.1
100°	4.8	16.2	33.2	45.0	48.0
102.5°	4.8	14.4	31.0	42.4	45.8
105°	3.9	12.7	28.8	39.7	43.2
107.5°	3.9	11.4	26.6	37.5	40.6
110°	3.5	9.6	24.9	34.9	38.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.1	8.3	22.7	32.3	35.8
115°	2.6	6.5	20.5	30.1	33.2
117.5°	2.6	5.2	18.3	27.5	31.0
120°	2.2	3.5	16.2	24.9	28.4
122.5°	2.2	2.2	14.0	22.7	25.8
125°	1.7	1.3	12.2	20.5	23.1
127.5°	1.7	1.3	10.0	17.9	21.0
130°	1.3	0.9	7.9	15.7	18.3
132.5°	1.3	0.9	6.1	13.5	16.2
135°	0.9	0.9	3.9	10.9	13.5
137.5°	0.9	0.4	2.2	8.7	10.9
140°	0.9	0.4	0.9	6.5	8.7
142.5°	0.4	0.4	0.0	4.8	6.5
145°	0.4	0.0	0.0	2.6	4.4
147.5°	0.4	0.0	0.0	0.4	2.2
150°	0.4	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)