

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: P243538

Luminaire Tested: **S124DR-H575D840-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243538
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-55)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DR-H575D840-X4F0-XX-UDD-D-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2165.6 lumens
Efficiency: N/A
Efficacy: 125.9 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

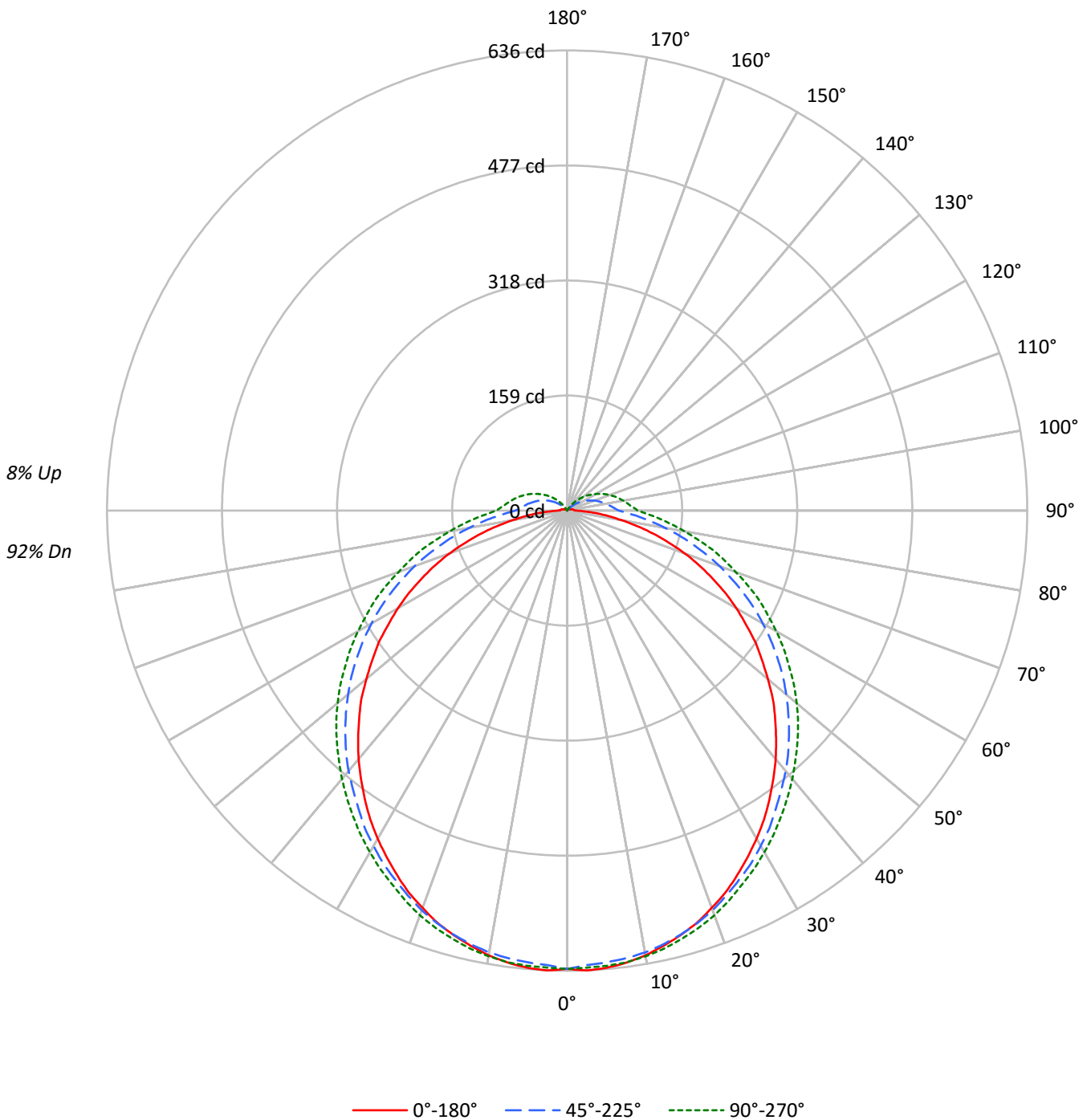
Input Watts (W): 17.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	86	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	46	55	49	45	43
5	72	59	50	43	70	58	49	42	55	47	41	52	45	40	49	43	39	37
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	44	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	37	30	25	36	29	25	34	29	24	22
10	50	37	29	24	49	36	29	23	35	28	23	33	27	22	32	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5631	5631	5631
5°	5648	5495	5506
10°	5612	5403	5392
15°	5557	5293	5262
20°	5485	5176	5132
25°	5400	5041	4980
30°	5310	4915	4850
35°	5210	4776	4716
40°	5111	4656	4590
45°	5004	4528	4470
50°	4884	4397	4346
55°	4778	4259	4201
60°	4628	4105	4061
65°	4453	3932	3919
70°	4245	3736	3717
75°	3917	3494	3570
80°	3472	3261	3360
85°	3144	3073	3240



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.0	2.8
10°-20°	172.0	7.9
20°-30°	260.3	12.0
30°-40°	315.2	14.6
40°-50°	333.4	15.4
50°-60°	314.1	14.5
60°-70°	261.0	12.1
70°-80°	183.5	8.5
80°-90°	103.3	4.8
90°-100°	61.3	2.8
100°-110°	45.4	2.1
110°-120°	30.3	1.4
120°-130°	17.1	0.8
130°-140°	7.3	0.3
140°-150°	1.4	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	492.3	22.7
0°-40°	807.5	37.3
0°-60°	1455.0	67.2
0°-90°	2002.8	92.5
90°-120°	137.0	6.3
90°-150°	162.8	7.5
90°-180°	163.0	7.5
0°-180°	2165.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	634	634	634	634	634	
5°	634	632	627	632	632	60
15°	607	609	607	613	613	171
25°	556	561	563	571	571	256
35°	487	496	503	514	516	305
45°	407	419	434	446	450	314
55°	318	335	355	370	374	283
65°	222	244	269	286	293	219
75°	123	150	179	199	207	130
85°	38	68	100	122	129	39
90°	11	40	71	91	98	8
95°	9	32	62	82	87	7
105°	7	21	47	65	71	7
115°	5	11	33	48	54	5
125°	3	2	20	33	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°	633.5	633.5	633.5	633.5	633.5
2.5°	636.2	634.2	628.8	632.9	632.2
5°	634.2	631.5	626.8	632.2	631.5
7.5°	630.2	628.1	624.1	630.2	629.5
10°	624.1	622.8	620.1	625.5	625.5
12.5°	616.0	616.0	614.0	620.1	620.1
15°	607.3	608.6	606.6	613.3	612.7
17.5°	597.2	598.5	597.9	604.6	604.6
20°	584.4	586.4	587.8	595.2	595.2
22.5°	571.6	574.3	575.6	583.7	583.7
25°	556.1	560.8	562.8	570.9	570.9
27.5°	540.0	546.0	550.1	557.5	558.8
30°	523.8	530.5	535.2	543.3	545.3
32.5°	506.3	513.0	520.4	528.5	531.2
35°	487.4	495.5	502.9	513.7	515.7
37.5°	467.9	477.3	486.1	497.5	500.2
40°	448.4	459.8	469.9	480.7	484.1
42.5°	427.5	439.0	452.4	463.9	467.2
45°	406.6	419.4	433.6	446.4	450.4
47.5°	385.8	399.2	414.7	428.2	432.9
50°	362.2	377.0	395.2	408.7	414.1
52.5°	339.3	355.5	375.7	389.1	395.2
55°	317.8	334.6	354.8	370.3	374.3
57.5°	292.9	311.7	333.9	350.8	354.8
60°	270.0	288.8	312.4	329.2	333.9
62.5°	246.4	266.6	290.8	307.7	312.4
65°	221.5	243.7	268.6	285.5	292.9
67.5°	197.3	219.5	245.7	264.6	270.6
70°	173.0	195.9	224.2	243.0	247.8
72.5°	147.4	172.4	201.3	220.8	227.6
75°	123.2	149.5	179.1	199.3	207.4
77.5°	99.6	127.2	158.2	179.1	184.5
80°	76.1	106.4	137.3	158.2	164.9
82.5°	57.2	85.5	117.8	140.0	145.4
85°	38.4	68.0	100.3	121.9	128.6
87.5°	22.9	53.2	84.2	104.4	111.1
90°	11.4	39.7	71.4	90.9	97.6
92.5°	10.1	35.7	66.0	85.5	92.2
95°	9.4	32.3	61.9	81.5	86.9
97.5°	8.8	29.6	57.9	76.8	82.8
100°	8.1	26.3	54.5	72.7	78.8
102.5°	7.4	23.6	50.5	68.7	74.7
105°	6.7	20.9	47.1	64.6	70.7
107.5°	6.1	18.2	43.8	60.6	66.7
110°	5.4	15.5	40.4	56.6	62.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4.7	13.5	36.4	52.5	58.6
115°	4.7	10.8	33.0	48.5	54.5
117.5°	4.0	8.1	29.6	44.4	49.8
120°	4.0	6.1	26.3	40.4	45.8
122.5°	3.4	4.0	22.9	37.0	41.7
125°	2.7	2.0	19.5	33.0	37.7
127.5°	2.7	2.0	16.2	29.0	33.7
130°	2.0	2.0	12.8	24.9	29.6
132.5°	2.0	1.3	9.4	21.5	25.6
135°	1.3	1.3	6.1	17.5	21.5
137.5°	1.3	0.7	4.0	14.1	18.2
140°	1.3	0.7	1.3	10.8	14.1
142.5°	0.7	0.7	0.0	7.4	10.1
145°	0.7	0.0	0.0	4.0	6.7
147.5°	0.7	0.0	0.0	0.7	3.4
150°	0.0	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)