

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: P243539

Luminaire Tested: **S124DR-H795D840-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243539
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-H795D840-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: 3032.9 lumens
Efficiency: N/A
Efficacy: 128.5 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

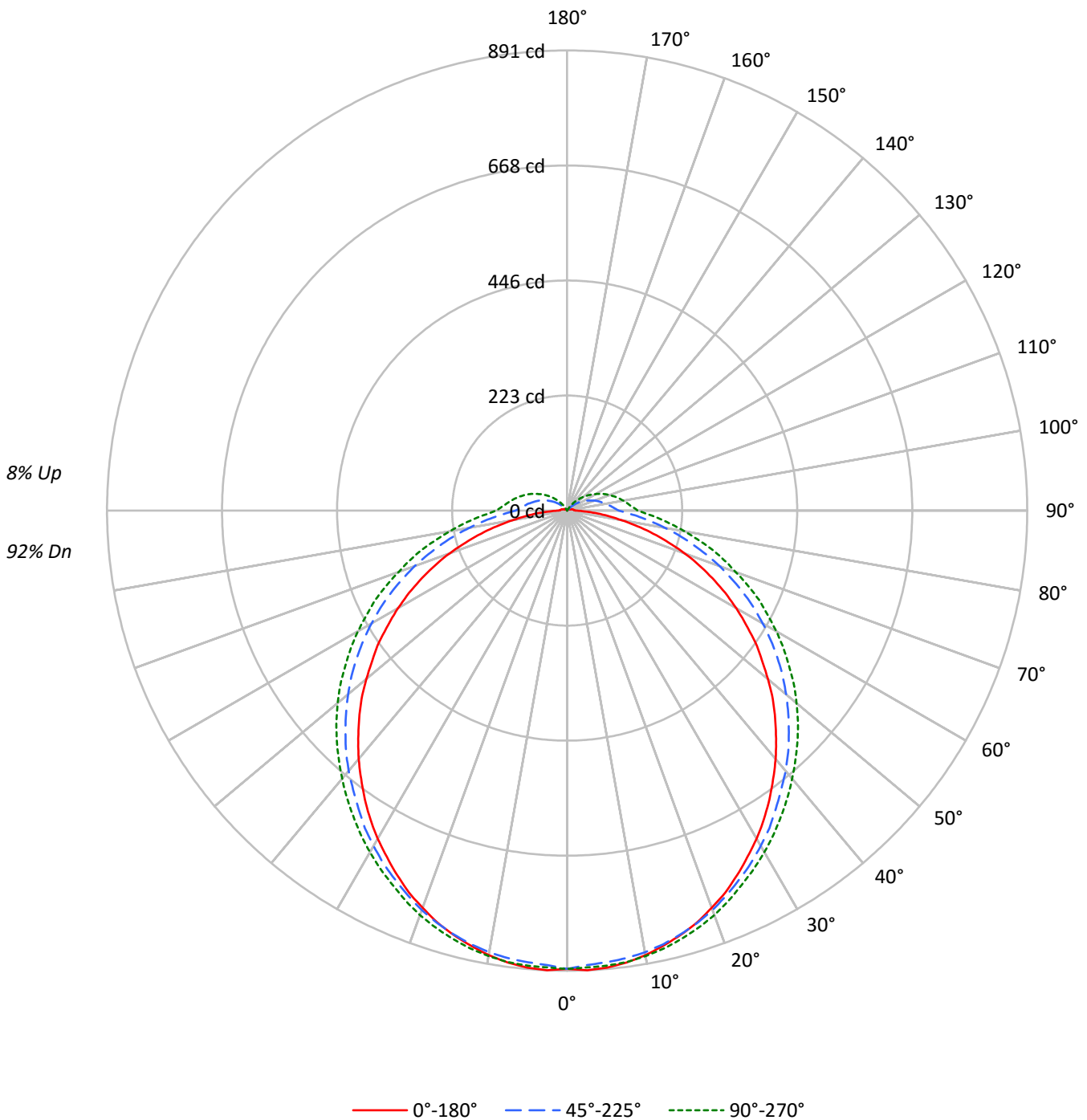
Input Watts (W): 23.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	7887	7887	7887
5°	7910	7695	7711
10°	7860	7566	7551
15°	7782	7413	7369
20°	7681	7248	7187
25°	7563	7061	6975
30°	7437	6884	6793
35°	7298	6688	6605
40°	7158	6521	6428
45°	7008	6341	6260
50°	6840	6159	6085
55°	6691	5965	5883
60°	6480	5749	5688
65°	6237	5506	5489
70°	5946	5232	5205
75°	5484	4893	4999
80°	4859	4567	4707
85°	4396	4304	4538



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.0	2.8
10°-20°	240.9	7.9
20°-30°	364.6	12.0
30°-40°	441.5	14.6
40°-50°	466.9	15.4
50°-60°	439.9	14.5
60°-70°	365.5	12.1
70°-80°	256.9	8.5
80°-90°	144.7	4.8
90°-100°	85.9	2.8
100°-110°	63.6	2.1
110°-120°	42.4	1.4
120°-130°	23.9	0.8
130°-140°	10.2	0.3
140°-150°	2.0	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	689.4	22.7
0°-40°	1130.9	37.3
0°-60°	2037.7	67.2
0°-90°	2804.9	92.5
90°-120°	191.9	6.3
90°-150°	228.0	7.5
90°-180°	228.0	7.5
0°-180°	3032.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	887	887	887	887	887	
5°	888	884	878	885	884	84
15°	850	852	850	859	858	240
25°	779	785	788	800	800	359
35°	683	694	704	719	722	427
45°	570	587	607	625	631	439
55°	445	469	497	519	524	397
65°	310	341	376	400	410	307
75°	172	209	251	279	290	183
85°	54	95	140	171	180	55
90°	16	56	100	127	137	11
95°	13	45	87	114	122	10
105°	9	29	66	90	99	10
115°	7	15	46	68	76	6
125°	4	3	27	46	53	4
135°	2	2	8	24	30	2
145°	1	0	0	6	9	1
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°	887.3	887.3	887.3	887.3	887.3
2.5°	891.0	888.2	880.7	886.3	885.4
5°	888.2	884.4	877.8	885.4	884.4
7.5°	882.5	879.7	874.1	882.5	881.6
10°	874.1	872.2	868.4	875.9	875.9
12.5°	862.7	862.7	859.9	868.4	868.4
15°	850.5	852.4	849.5	859.0	858.0
17.5°	836.3	838.2	837.3	846.7	846.7
20°	818.4	821.3	823.1	833.5	833.5
22.5°	800.5	804.3	806.2	817.5	817.5
25°	778.8	785.4	788.3	799.6	799.6
27.5°	756.2	764.7	770.3	780.7	782.6
30°	733.6	743.0	749.6	760.9	763.7
32.5°	709.1	718.5	728.9	740.2	743.9
35°	682.7	694.0	704.3	719.4	722.3
37.5°	655.3	668.5	680.8	696.8	700.6
40°	628.0	644.0	658.1	673.2	677.9
42.5°	598.7	614.8	633.6	649.7	654.4
45°	569.5	587.4	607.2	625.1	630.8
47.5°	540.3	559.1	580.8	599.7	606.3
50°	507.3	528.0	553.5	572.3	579.9
52.5°	475.2	497.8	526.1	545.0	553.5
55°	445.0	468.6	496.9	518.6	524.2
57.5°	410.2	436.6	467.7	491.2	496.9
60°	378.1	404.5	437.5	461.1	467.7
62.5°	345.1	373.4	407.3	430.9	437.5
65°	310.2	341.3	376.2	399.8	410.2
67.5°	276.3	307.4	344.2	370.6	379.0
70°	242.3	274.4	314.0	340.4	347.0
72.5°	206.5	241.4	281.9	309.3	318.7
75°	172.5	209.3	250.8	279.1	290.4
77.5°	139.5	178.2	221.6	250.8	258.4
80°	106.5	149.0	192.3	221.6	231.0
82.5°	80.1	119.7	165.0	196.1	203.7
85°	53.7	95.2	140.5	170.7	180.1
87.5°	32.1	74.5	117.9	146.1	155.6
90°	16.0	55.6	99.9	127.3	136.7
92.5°	14.1	50.0	92.4	119.7	129.2
95°	13.2	45.3	86.7	114.1	121.6
97.5°	12.3	41.5	81.1	107.5	116.0
100°	11.3	36.8	76.4	101.8	110.3
102.5°	10.4	33.0	70.7	96.2	104.7
105°	9.4	29.2	66.0	90.5	99.0
107.5°	8.5	25.5	61.3	84.9	93.3
110°	7.5	21.7	56.6	79.2	87.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	6.6	18.9	50.9	73.5	82.0
115°	6.6	15.1	46.2	67.9	76.4
117.5°	5.7	11.3	41.5	62.2	69.8
120°	5.7	8.5	36.8	56.6	64.1
122.5°	4.7	5.7	32.1	51.9	58.5
125°	3.8	2.8	27.3	46.2	52.8
127.5°	3.8	2.8	22.6	40.5	47.1
130°	2.8	2.8	17.9	34.9	41.5
132.5°	2.8	1.9	13.2	30.2	35.8
135°	1.9	1.9	8.5	24.5	30.2
137.5°	1.9	0.9	5.7	19.8	25.5
140°	1.9	0.9	1.9	15.1	19.8
142.5°	0.9	0.9	0.0	10.4	14.1
145°	0.9	0.0	0.0	5.7	9.4
147.5°	0.9	0.0	0.0	0.9	4.7
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)