

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: P243526

Luminaire Tested: **S124DR-H1020D927-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243526
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-H1020D927-X4F0-XX-UDD-D-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3068.2 lumens
Efficiency: N/A
Efficacy: 97.4 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

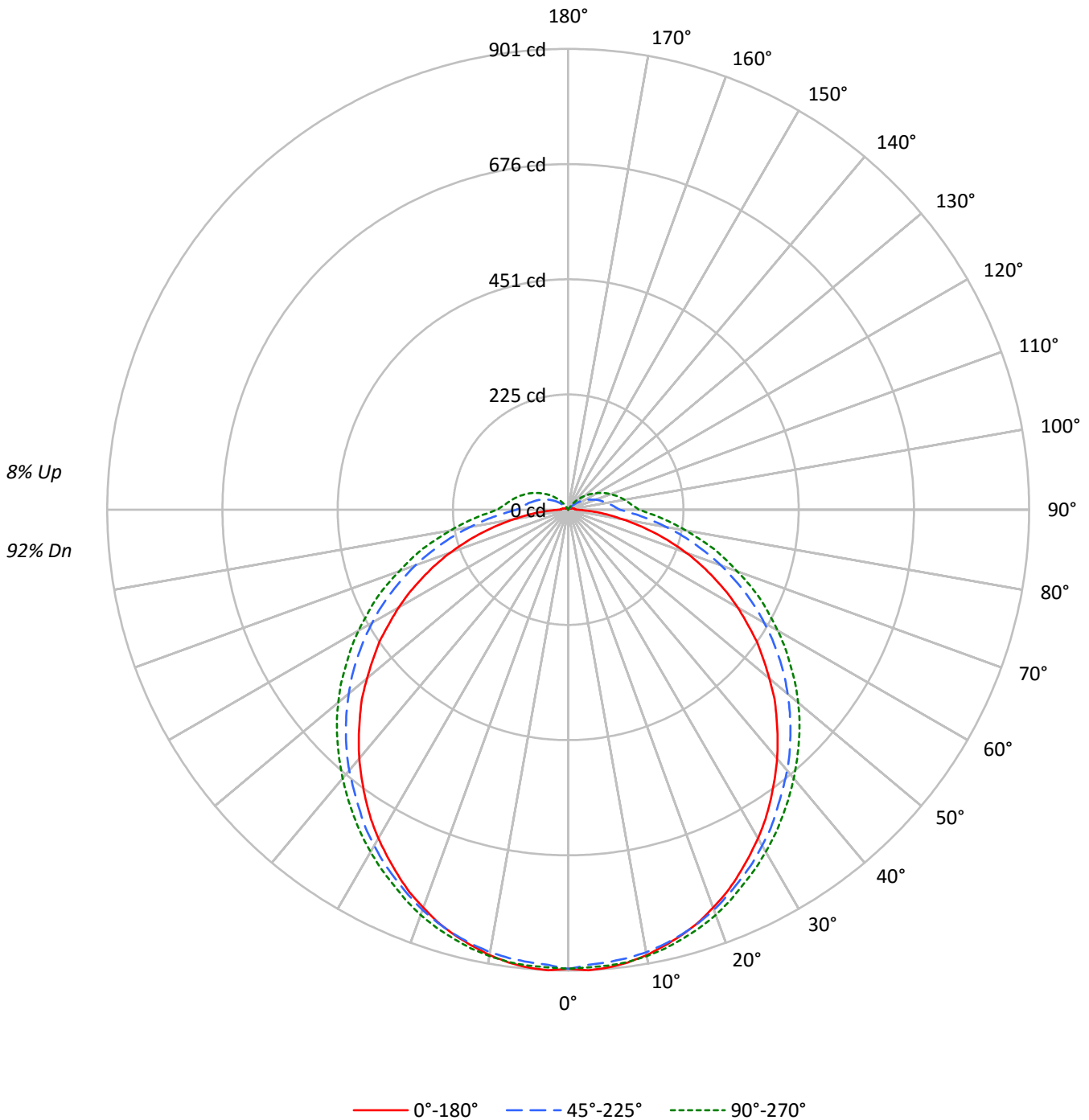
Input Watts (W): 31.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	7979	7979	7979
5°	8002	7785	7801
10°	7951	7654	7639
15°	7872	7499	7455
20°	7772	7333	7271
25°	7651	7142	7056
30°	7524	6964	6872
35°	7383	6766	6682
40°	7241	6598	6503
45°	7090	6415	6333
50°	6920	6230	6156
55°	6769	6034	5952
60°	6556	5816	5753
65°	6309	5571	5552
70°	6015	5292	5265
75°	5551	4949	5057
80°	4918	4621	4762
85°	4454	4353	4591



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.0	2.8
10°-20°	243.7	7.9
20°-30°	368.8	12.0
30°-40°	446.6	14.6
40°-50°	472.4	15.4
50°-60°	445.0	14.5
60°-70°	369.8	12.1
70°-80°	259.9	8.5
80°-90°	146.4	4.8
90°-100°	86.9	2.8
100°-110°	64.3	2.1
110°-120°	42.9	1.4
120°-130°	24.2	0.8
130°-140°	10.4	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°	697.5	22.7
0°-40°	1144.1	37.3
0°-60°	2061.4	67.2
0°-90°	2837.5	92.5
90°-120°	194.1	6.3
90°-150°	230.7	7.5
90°-180°	231.0	7.5
0°-180°	3068.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	898	898	898	898	898	
5°	898	895	888	896	895	85
15°	860	862	859	869	868	243
25°	788	795	797	809	809	363
35°	691	702	712	728	731	432
45°	576	594	614	632	638	445
55°	450	474	503	525	530	401
65°	314	345	381	404	415	311
75°	175	212	254	282	294	185
85°	54	96	142	173	182	56
90°	16	56	101	129	138	11
95°	13	46	88	115	123	11
105°	10	30	67	92	100	10
115°	7	15	47	69	77	6
125°	4	3	28	47	53	4
135°	2	2	9	25	30	2
145°	1	0	0	6	10	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°	897.6	897.6	897.6	897.6	897.6
2.5°	901.4	898.5	890.9	896.6	895.7
5°	898.5	894.7	888.0	895.7	894.7
7.5°	892.8	890.0	884.2	892.8	891.9
10°	884.2	882.3	878.5	886.1	886.1
12.5°	872.8	872.8	869.9	878.5	878.5
15°	860.4	862.3	859.4	869.0	868.0
17.5°	846.1	848.0	847.0	856.6	856.6
20°	828.0	830.8	832.7	843.2	843.2
22.5°	809.8	813.6	815.6	827.0	827.0
25°	787.9	794.6	797.4	808.9	808.9
27.5°	765.0	773.6	779.3	789.8	791.7
30°	742.1	751.6	758.3	769.8	772.6
32.5°	717.3	726.8	737.3	748.8	752.6
35°	690.6	702.0	712.5	727.8	730.7
37.5°	662.9	676.3	688.7	704.9	708.7
40°	635.3	651.5	665.8	681.1	685.8
42.5°	605.7	621.9	641.0	657.2	662.0
45°	576.1	594.3	614.3	632.4	638.1
47.5°	546.6	565.6	587.6	606.7	613.3
50°	513.2	534.2	559.9	579.0	586.6
52.5°	480.7	503.6	532.3	551.3	559.9
55°	450.2	474.1	502.7	524.6	530.3
57.5°	414.9	441.6	473.1	497.0	502.7
60°	382.5	409.2	442.6	466.4	473.1
62.5°	349.1	377.7	412.1	435.9	442.6
65°	313.8	345.3	380.6	404.4	414.9
67.5°	279.5	311.0	348.2	374.9	383.5
70°	245.1	277.6	317.6	344.3	351.0
72.5°	208.9	244.2	285.2	312.9	322.4
75°	174.6	211.8	253.7	282.3	293.8
77.5°	141.2	180.3	224.2	253.7	261.4
80°	107.8	150.7	194.6	224.2	233.7
82.5°	81.1	121.1	166.9	198.4	206.0
85°	54.4	96.3	142.1	172.6	182.2
87.5°	32.4	75.4	119.2	147.8	157.4
90°	16.2	56.3	101.1	128.8	138.3
92.5°	14.3	50.6	93.5	121.1	130.7
95°	13.4	45.8	87.8	115.4	123.0
97.5°	12.4	42.0	82.0	108.7	117.3
100°	11.4	37.2	77.3	103.0	111.6
102.5°	10.5	33.4	71.5	97.3	105.9
105°	9.5	29.6	66.8	91.6	100.2
107.5°	8.6	25.8	62.0	85.8	94.4
110°	7.6	21.9	57.2	80.1	88.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	6.7	19.1	51.5	74.4	83.0
115°	6.7	15.3	46.7	68.7	77.3
117.5°	5.7	11.4	42.0	63.0	70.6
120°	5.7	8.6	37.2	57.2	64.9
122.5°	4.8	5.7	32.4	52.5	59.1
125°	3.8	2.9	27.7	46.7	53.4
127.5°	3.8	2.9	22.9	41.0	47.7
130°	2.9	2.9	18.1	35.3	42.0
132.5°	2.9	1.9	13.4	30.5	36.2
135°	1.9	1.9	8.6	24.8	30.5
137.5°	1.9	1.0	5.7	20.0	25.8
140°	1.9	1.0	1.9	15.3	20.0
142.5°	1.0	1.0	0.0	10.5	14.3
145°	1.0	0.0	0.0	5.7	9.5
147.5°	1.0	0.0	0.0	1.0	4.8
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)