

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: P242666

Luminaire Tested: **S124DR-S1020D927-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242666
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-S1020D927-X4F0-XX-UDD-D-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3075.7 lumens
Efficiency: N/A
Efficacy: 88.4 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

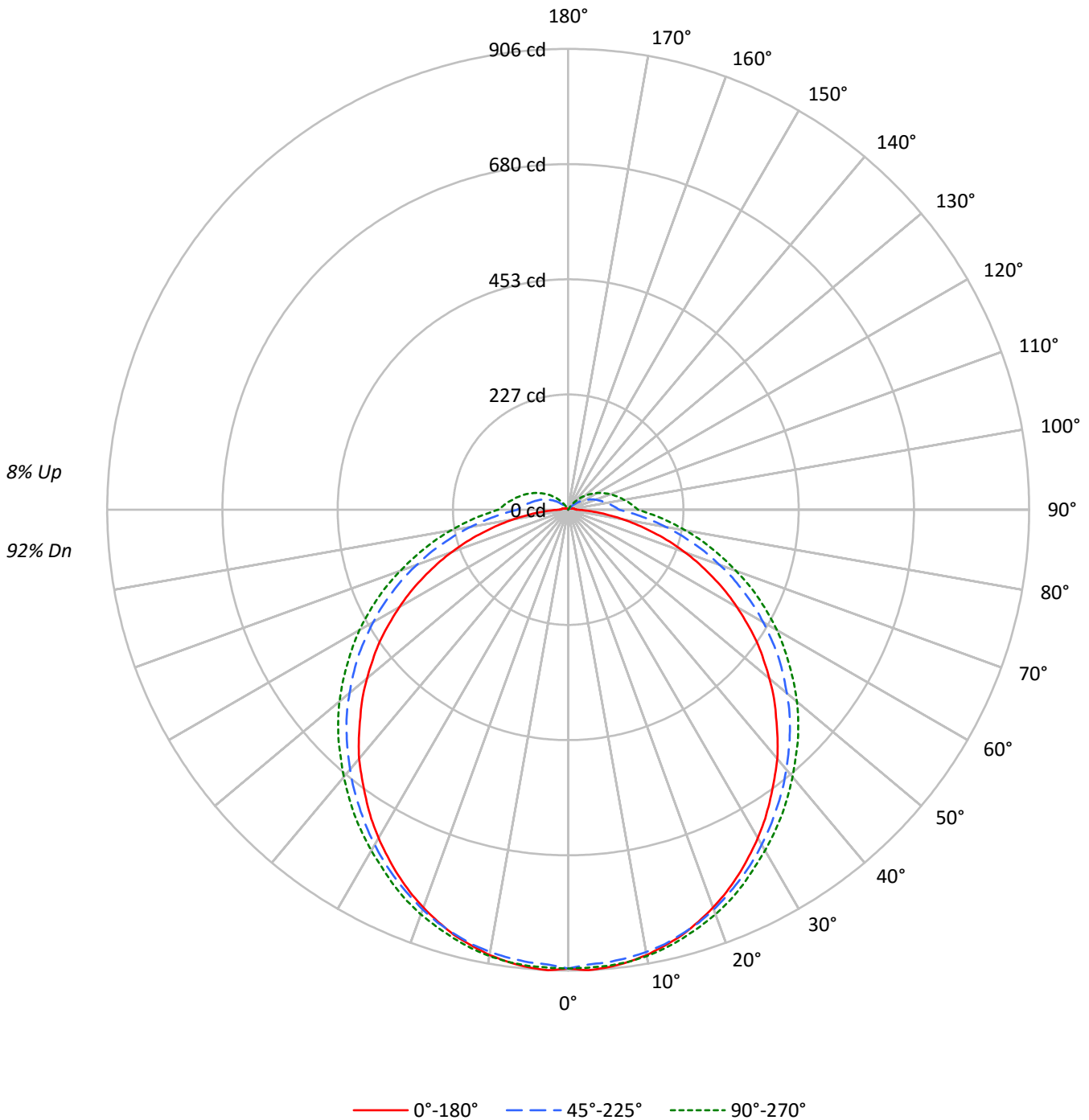
Input Watts (W): 34.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	8019	8019	8019
5°	8043	7829	7848
10°	7994	7693	7681
15°	7922	7537	7488
20°	7813	7366	7300
25°	7691	7175	7094
30°	7558	6986	6883
35°	7408	6792	6697
40°	7289	6607	6504
45°	7111	6435	6337
50°	6960	6239	6159
55°	6805	6051	5953
60°	6563	5815	5762
65°	6297	5559	5529
70°	5975	5268	5257
75°	5526	4947	5007
80°	5023	4631	4756
85°	4380	4332	4581



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.5	2.8
10°-20°	244.9	8.0
20°-30°	370.3	12.0
30°-40°	448.0	14.6
40°-50°	473.6	15.4
50°-60°	445.7	14.5
60°-70°	369.9	12.0
70°-80°	259.6	8.4
80°-90°	146.3	4.8
90°-100°	87.1	2.8
100°-110°	64.5	2.1
110°-120°	43.3	1.4
120°-130°	24.4	0.8
130°-140°	10.5	0.3
140°-150°	2.1	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	700.7	22.8
0°-40°	1148.7	37.3
0°-60°	2068.0	67.2
0°-90°	2843.8	92.5
90°-120°	194.9	6.3
90°-150°	231.9	7.5
90°-180°	232.0	7.5
0°-180°	3075.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	902	902	902	902	902	
5°	903	900	893	901	900	86
15°	866	867	864	873	872	244
25°	792	798	801	812	813	365
35°	693	705	715	729	732	434
45°	578	597	616	633	638	447
55°	453	474	504	524	530	403
65°	313	346	380	405	413	310
75°	174	211	254	282	291	185
85°	54	96	141	172	182	56
90°	16	57	100	129	137	11
95°	13	46	88	115	124	10
105°	9	29	67	92	100	10
115°	6	15	48	70	77	6
125°	4	3	28	48	54	4
135°	2	2	9	25	31	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°	902.1	902.1	902.1	902.1	902.1
2.5°	906.2	903.1	895.1	902.1	901.1
5°	903.1	900.1	893.0	901.1	900.1
7.5°	897.1	895.1	889.0	898.1	897.1
10°	889.0	888.0	882.9	892.0	891.0
12.5°	877.9	877.9	874.9	882.9	882.9
15°	865.8	866.8	863.7	872.8	871.8
17.5°	849.6	852.6	851.6	860.7	859.7
20°	832.4	835.5	836.5	846.6	846.6
22.5°	813.2	817.3	819.3	829.4	831.4
25°	792.0	798.1	801.1	812.2	813.2
27.5°	768.8	777.9	781.9	792.0	793.0
30°	745.5	753.6	760.7	771.8	773.8
32.5°	720.3	730.4	738.5	751.6	753.6
35°	693.0	705.1	715.2	729.4	732.4
37.5°	665.7	679.9	692.0	706.1	709.2
40°	639.5	652.6	666.7	681.9	685.9
42.5°	609.2	624.3	641.5	658.7	661.7
45°	577.8	597.0	616.2	633.4	638.5
47.5°	548.6	567.7	590.0	607.1	613.2
50°	516.2	538.5	560.7	580.9	586.9
52.5°	483.9	506.1	532.4	552.6	558.7
55°	452.6	473.8	504.1	524.3	530.4
57.5°	417.2	443.5	472.8	497.0	502.1
60°	382.9	409.1	442.5	465.7	473.8
62.5°	349.5	378.8	412.2	435.4	443.5
65°	313.2	345.5	379.8	405.1	413.2
67.5°	278.8	313.2	349.5	374.8	382.9
70°	243.5	277.8	316.2	343.5	350.5
72.5°	209.1	244.5	285.9	312.2	320.2
75°	173.8	211.1	253.6	281.9	290.9
77.5°	140.4	179.8	224.3	252.6	262.7
80°	110.1	150.5	195.0	225.3	233.4
82.5°	79.8	122.2	166.7	198.0	207.1
85°	53.5	96.0	141.4	171.7	181.8
87.5°	33.3	74.8	119.2	148.5	157.6
90°	16.2	56.6	100.0	129.3	137.4
92.5°	15.2	50.5	94.0	122.2	130.3
95°	13.1	46.5	87.9	115.2	124.3
97.5°	12.1	41.4	82.8	109.1	118.2
100°	11.1	37.4	76.8	104.1	111.1
102.5°	11.1	33.3	71.7	98.0	106.1
105°	9.1	29.3	66.7	91.9	100.0
107.5°	9.1	26.3	61.6	86.9	94.0
110°	8.1	22.2	57.6	80.8	88.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	7.1	19.2	52.5	74.8	82.8
115°	6.1	15.2	47.5	69.7	76.8
117.5°	6.1	12.1	42.4	63.6	71.7
120°	5.1	8.1	37.4	57.6	65.7
122.5°	5.1	5.1	32.3	52.5	59.6
125°	4.0	3.0	28.3	47.5	53.5
127.5°	4.0	3.0	23.2	41.4	48.5
130°	3.0	2.0	18.2	36.4	42.4
132.5°	3.0	2.0	14.1	31.3	37.4
135°	2.0	2.0	9.1	25.3	31.3
137.5°	2.0	1.0	5.1	20.2	25.3
140°	2.0	1.0	2.0	15.2	20.2
142.5°	1.0	1.0	0.0	11.1	15.2
145°	1.0	0.0	0.0	6.1	10.1
147.5°	1.0	0.0	0.0	1.0	5.1
150°	1.0	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)