

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: P243550

Luminaire Tested: **S124DR-H1020D935-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243550
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-H1020D935-X4F0-XX-UDD-D-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3334.7 lumens
Efficiency: N/A
Efficacy: 105.9 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

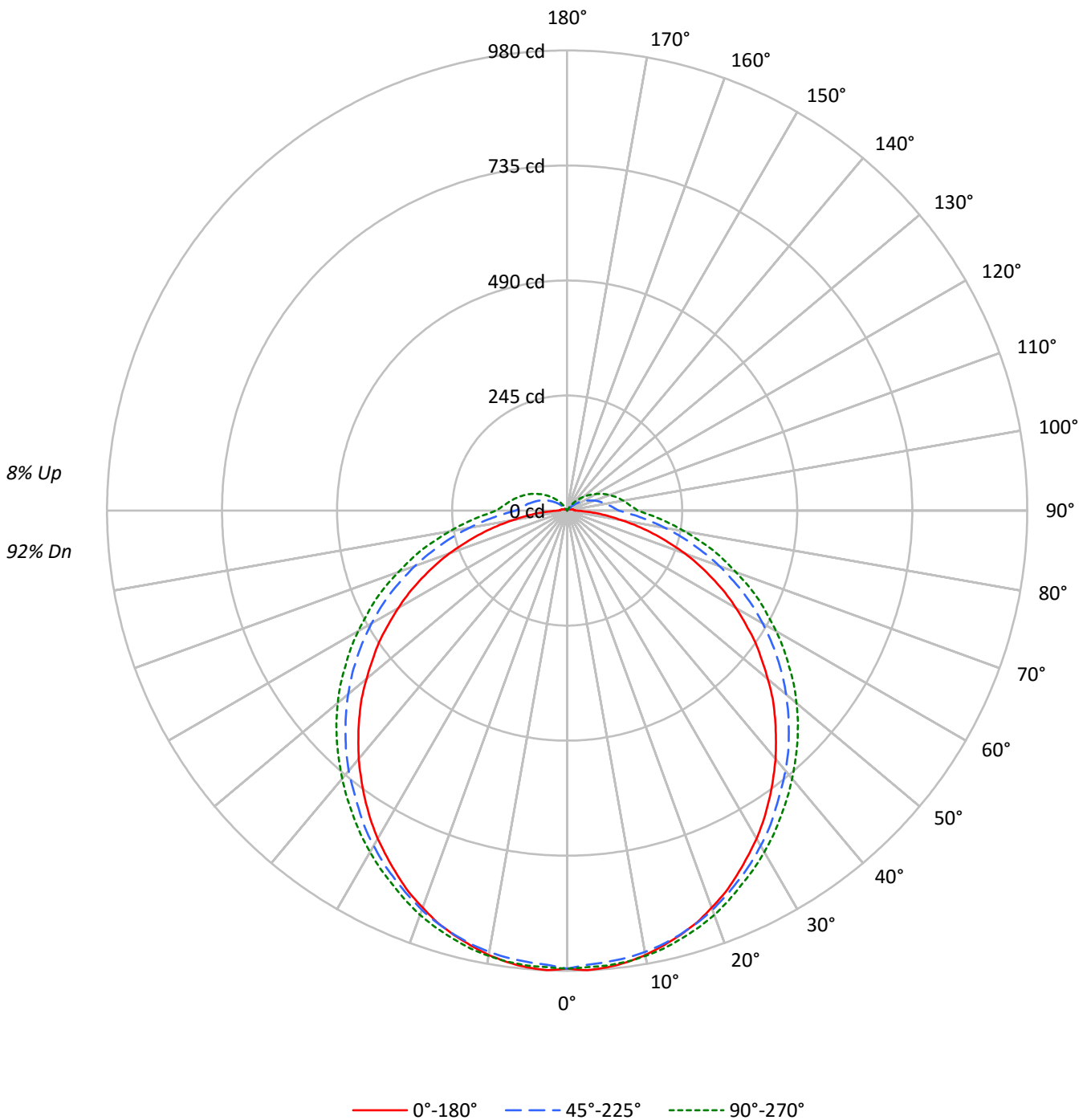
Input Watts (W): 31.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	8672	8672	8672
5°	8698	8462	8480
10°	8641	8319	8303
15°	8556	8151	8103
20°	8446	7971	7903
25°	8315	7763	7669
30°	8177	7569	7470
35°	8024	7354	7261
40°	7870	7170	7068
45°	7706	6973	6884
50°	7521	6772	6691
55°	7357	6559	6469
60°	7125	6320	6253
65°	6858	6055	6035
70°	6537	5752	5722
75°	6031	5381	5496
80°	5347	5023	5175
85°	4838	4733	4989



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.4	2.8
10°-20°	264.8	7.9
20°-30°	400.8	12.0
30°-40°	485.4	14.6
40°-50°	513.4	15.4
50°-60°	483.7	14.5
60°-70°	401.9	12.1
70°-80°	282.5	8.5
80°-90°	159.1	4.8
90°-100°	94.4	2.8
100°-110°	69.9	2.1
110°-120°	46.6	1.4
120°-130°	26.3	0.8
130°-140°	11.3	0.3
140°-150°	2.2	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	758.1	22.7
0°-40°	1243.5	37.3
0°-60°	2240.5	67.2
0°-90°	3084.0	92.5
90°-120°	211.0	6.3
90°-150°	250.7	7.5
90°-180°	251.0	7.5
0°-180°	3334.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	976	976	976	976	976	
5°	977	972	965	974	972	93
15°	935	937	934	944	943	264
25°	856	864	867	879	879	395
35°	751	763	774	791	794	470
45°	626	646	668	687	694	483
55°	489	515	546	570	576	436
65°	341	375	414	440	451	338
75°	190	230	276	307	319	201
85°	59	105	154	188	198	61
90°	18	61	110	140	150	12
95°	14	50	95	125	134	11
105°	10	32	73	100	109	11
115°	7	17	51	75	84	7
125°	4	3	30	51	58	4
135°	2	2	9	27	33	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°	975.6	975.6	975.6	975.6	975.6
2.5°	979.7	976.6	968.3	974.5	973.5
5°	976.6	972.5	965.2	973.5	972.5
7.5°	970.4	967.3	961.0	970.4	969.3
10°	961.0	959.0	954.8	963.1	963.1
12.5°	948.6	948.6	945.5	954.8	954.8
15°	935.1	937.2	934.1	944.5	943.4
17.5°	919.6	921.7	920.6	931.0	931.0
20°	899.9	903.0	905.1	916.5	916.5
22.5°	880.2	884.3	886.4	898.8	898.8
25°	856.3	863.6	866.7	879.1	879.1
27.5°	831.5	840.8	847.0	858.4	860.5
30°	806.6	816.9	824.2	836.6	839.8
32.5°	779.6	790.0	801.4	813.8	818.0
35°	750.6	763.0	774.4	791.0	794.1
37.5°	720.5	735.0	748.5	766.1	770.3
40°	690.5	708.1	723.6	740.2	745.4
42.5°	658.3	675.9	696.7	714.3	719.5
45°	626.2	645.9	667.7	687.4	693.6
47.5°	594.0	614.8	638.6	659.4	666.6
50°	557.8	580.6	608.6	629.3	637.6
52.5°	522.5	547.4	578.5	599.2	608.6
55°	489.3	515.3	546.4	570.2	576.4
57.5°	451.0	480.0	514.2	540.1	546.4
60°	415.7	444.8	481.0	507.0	514.2
62.5°	379.4	410.5	447.9	473.8	481.0
65°	341.1	375.3	413.7	439.6	451.0
67.5°	303.8	338.0	378.4	407.4	416.8
70°	266.4	301.7	345.2	374.3	381.5
72.5°	227.0	265.4	310.0	340.0	350.4
75°	189.7	230.2	275.8	306.9	319.3
77.5°	153.4	195.9	243.6	275.8	284.1
80°	117.2	163.8	211.5	243.6	254.0
82.5°	88.1	131.7	181.4	215.6	223.9
85°	59.1	104.7	154.5	187.6	198.0
87.5°	35.2	81.9	129.6	160.7	171.1
90°	17.6	61.2	109.9	140.0	150.3
92.5°	15.6	54.9	101.6	131.7	142.0
95°	14.5	49.8	95.4	125.4	133.7
97.5°	13.5	45.6	89.2	118.2	127.5
100°	12.4	40.4	84.0	112.0	121.3
102.5°	11.4	36.3	77.8	105.7	115.1
105°	10.4	32.1	72.6	99.5	108.9
107.5°	9.3	28.0	67.4	93.3	102.6
110°	8.3	23.8	62.2	87.1	96.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	7.3	20.7	56.0	80.9	90.2
115°	7.3	16.6	50.8	74.6	84.0
117.5°	6.2	12.4	45.6	68.4	76.7
120°	6.2	9.3	40.4	62.2	70.5
122.5°	5.2	6.2	35.2	57.0	64.3
125°	4.1	3.1	30.1	50.8	58.1
127.5°	4.1	3.1	24.9	44.6	51.8
130°	3.1	3.1	19.7	38.4	45.6
132.5°	3.1	2.1	14.5	33.2	39.4
135°	2.1	2.1	9.3	27.0	33.2
137.5°	2.1	1.0	6.2	21.8	28.0
140°	2.1	1.0	2.1	16.6	21.8
142.5°	1.0	1.0	0.0	11.4	15.6
145°	1.0	0.0	0.0	6.2	10.4
147.5°	1.0	0.0	0.0	1.0	5.2
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)