

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: P242686

Luminaire Tested: **S124DR-S1195D930-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242686
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-S1195D930-X4F0-XX-UDD-D-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3678.9 lumens
Efficiency: N/A
Efficacy: 89.5 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

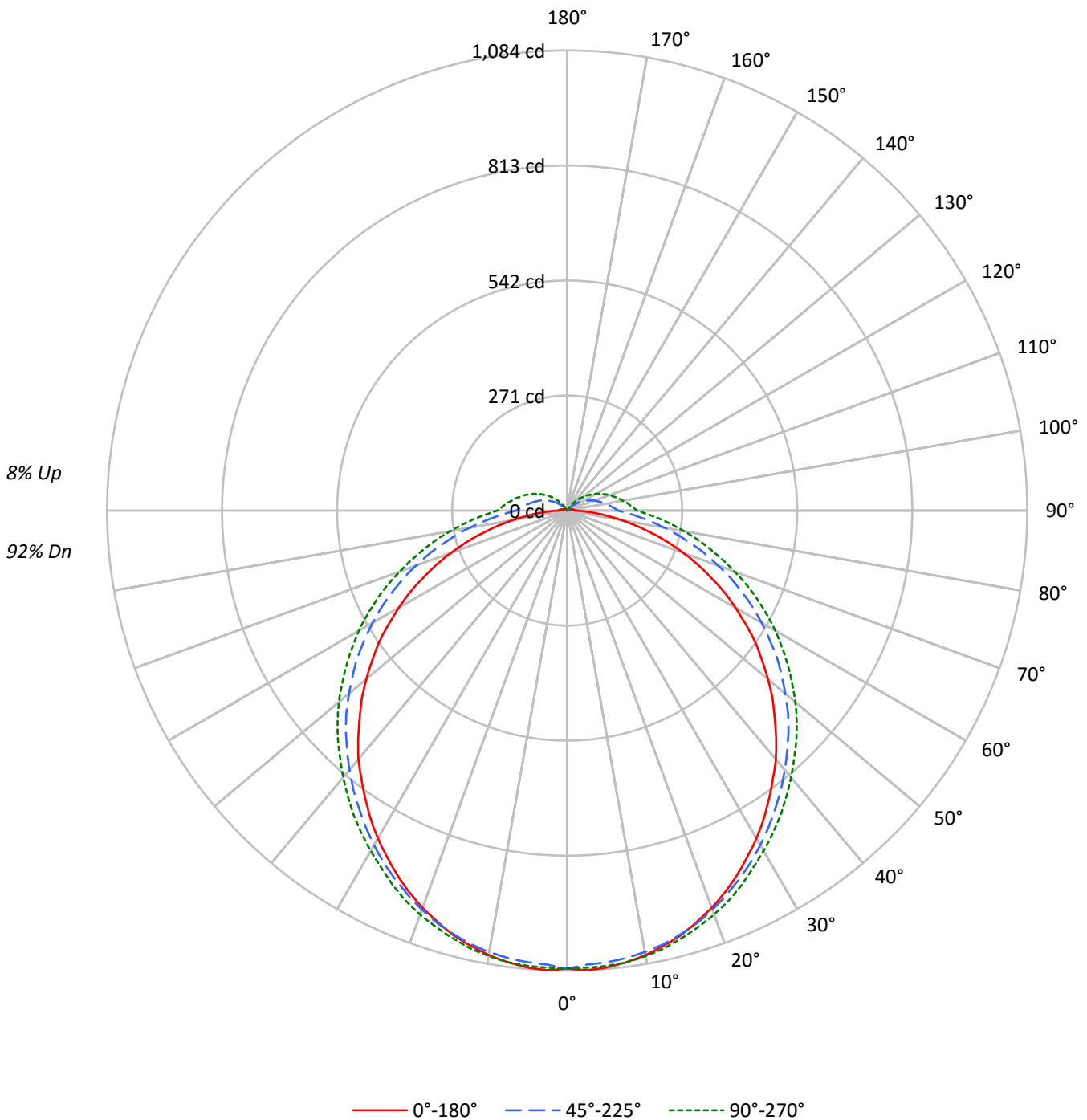
Input Watts (W): 41.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	9591	9591	9591
5°	9621	9364	9387
10°	9561	9202	9188
15°	9475	9015	8956
20°	9346	8811	8731
25°	9199	8582	8485
30°	9041	8356	8233
35°	8861	8124	8010
40°	8718	7903	7780
45°	8506	7698	7579
50°	8326	7462	7367
55°	8139	7238	7120
60°	7850	6955	6892
65°	7532	6650	6613
70°	7146	6301	6289
75°	6606	5917	5990
80°	6009	5538	5687
85°	5239	5184	5480



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.2	2.8
10°-20°	292.9	8.0
20°-30°	442.9	12.0
30°-40°	535.9	14.6
40°-50°	566.5	15.4
50°-60°	533.1	14.5
60°-70°	442.4	12.0
70°-80°	310.5	8.4
80°-90°	175.0	4.8
90°-100°	104.2	2.8
100°-110°	77.2	2.1
110°-120°	51.8	1.4
120°-130°	29.2	0.8
130°-140°	12.6	0.3
140°-150°	2.5	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	838.1	22.8
0°-40°	1374.0	37.3
0°-60°	2473.6	67.2
0°-90°	3401.5	92.5
90°-120°	233.2	6.3
90°-150°	277.4	7.5
90°-180°	277.0	7.5
0°-180°	3678.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1079	1079	1079	1079	1079	
5°	1080	1077	1068	1078	1077	103
15°	1036	1037	1033	1044	1043	292
25°	947	955	958	972	973	436
35°	829	843	856	872	876	519
45°	691	714	737	758	764	534
55°	541	567	603	627	634	482
65°	375	413	454	484	494	371
75°	208	252	303	337	348	221
85°	64	115	169	205	218	67
90°	19	68	120	155	164	13
95°	16	56	105	138	149	13
105°	11	35	80	110	120	12
115°	7	18	57	83	92	8
125°	5	4	34	57	64	5
135°	2	2	11	30	38	2
145°	1	0	0	7	12	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°	1079.0	1079.0	1079.0	1079.0	1079.0
2.5°	1083.9	1080.3	1070.6	1079.0	1077.8
5°	1080.3	1076.6	1068.2	1077.8	1076.6
7.5°	1073.0	1070.6	1063.3	1074.2	1073.0
10°	1063.3	1062.1	1056.1	1067.0	1065.8
12.5°	1050.0	1050.0	1046.4	1056.1	1056.1
15°	1035.5	1036.8	1033.1	1044.0	1042.8
17.5°	1016.2	1019.8	1018.6	1029.5	1028.3
20°	995.7	999.3	1000.5	1012.6	1012.6
22.5°	972.7	977.5	980.0	992.0	994.5
25°	947.3	954.6	958.2	971.5	972.7
27.5°	919.5	930.4	935.3	947.3	948.5
30°	891.8	901.4	909.9	923.2	925.6
32.5°	861.5	873.6	883.3	899.0	901.4
35°	828.9	843.4	855.5	872.4	876.0
37.5°	796.3	813.2	827.7	844.6	848.3
40°	764.9	780.6	797.5	815.6	820.5
42.5°	728.6	746.8	767.3	787.8	791.5
45°	691.2	714.1	737.1	757.6	763.7
47.5°	656.1	679.1	705.7	726.2	733.5
50°	617.5	644.0	670.6	694.8	702.0
52.5°	578.8	605.4	636.8	661.0	668.2
55°	541.3	566.7	603.0	627.1	634.4
57.5°	499.0	530.5	565.5	594.5	600.5
60°	458.0	489.4	529.3	557.0	566.7
62.5°	418.1	453.1	493.0	520.8	530.5
65°	374.6	413.3	454.3	484.5	494.2
67.5°	333.5	374.6	418.1	448.3	458.0
70°	291.2	332.3	378.2	410.8	419.3
72.5°	250.1	292.4	342.0	373.4	383.0
75°	207.8	252.5	303.3	337.1	348.0
77.5°	168.0	215.1	268.3	302.1	314.2
80°	131.7	180.0	233.2	269.5	279.1
82.5°	95.5	146.2	199.4	236.8	247.7
85°	64.0	114.8	169.2	205.4	217.5
87.5°	39.9	89.4	142.6	177.6	188.5
90°	19.3	67.7	119.6	154.7	164.3
92.5°	18.1	60.4	112.4	146.2	155.9
95°	15.7	55.6	105.1	137.8	148.6
97.5°	14.5	49.5	99.1	130.5	141.4
100°	13.3	44.7	91.8	124.5	132.9
102.5°	13.3	39.9	85.8	117.2	126.9
105°	10.9	35.0	79.8	110.0	119.6
107.5°	10.9	31.4	73.7	103.9	112.4
110°	9.7	26.6	68.9	96.7	106.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	8.5	23.0	62.8	89.4	99.1
115°	7.3	18.1	56.8	83.4	91.8
117.5°	7.3	14.5	50.8	76.1	85.8
120°	6.0	9.7	44.7	68.9	78.5
122.5°	6.0	6.0	38.7	62.8	71.3
125°	4.8	3.6	33.8	56.8	64.0
127.5°	4.8	3.6	27.8	49.5	58.0
130°	3.6	2.4	21.8	43.5	50.8
132.5°	3.6	2.4	16.9	37.5	44.7
135°	2.4	2.4	10.9	30.2	37.5
137.5°	2.4	1.2	6.0	24.2	30.2
140°	2.4	1.2	2.4	18.1	24.2
142.5°	1.2	1.2	0.0	13.3	18.1
145°	1.2	0.0	0.0	7.3	12.1
147.5°	1.2	0.0	0.0	1.2	6.0
150°	1.2	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)