

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: P243545

Luminaire Tested: **S124DR-H1020D930-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243545
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-H1020D930-X4F0-XX-UDD-D-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3157.7 lumens
Efficiency: N/A
Efficacy: 100.2 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

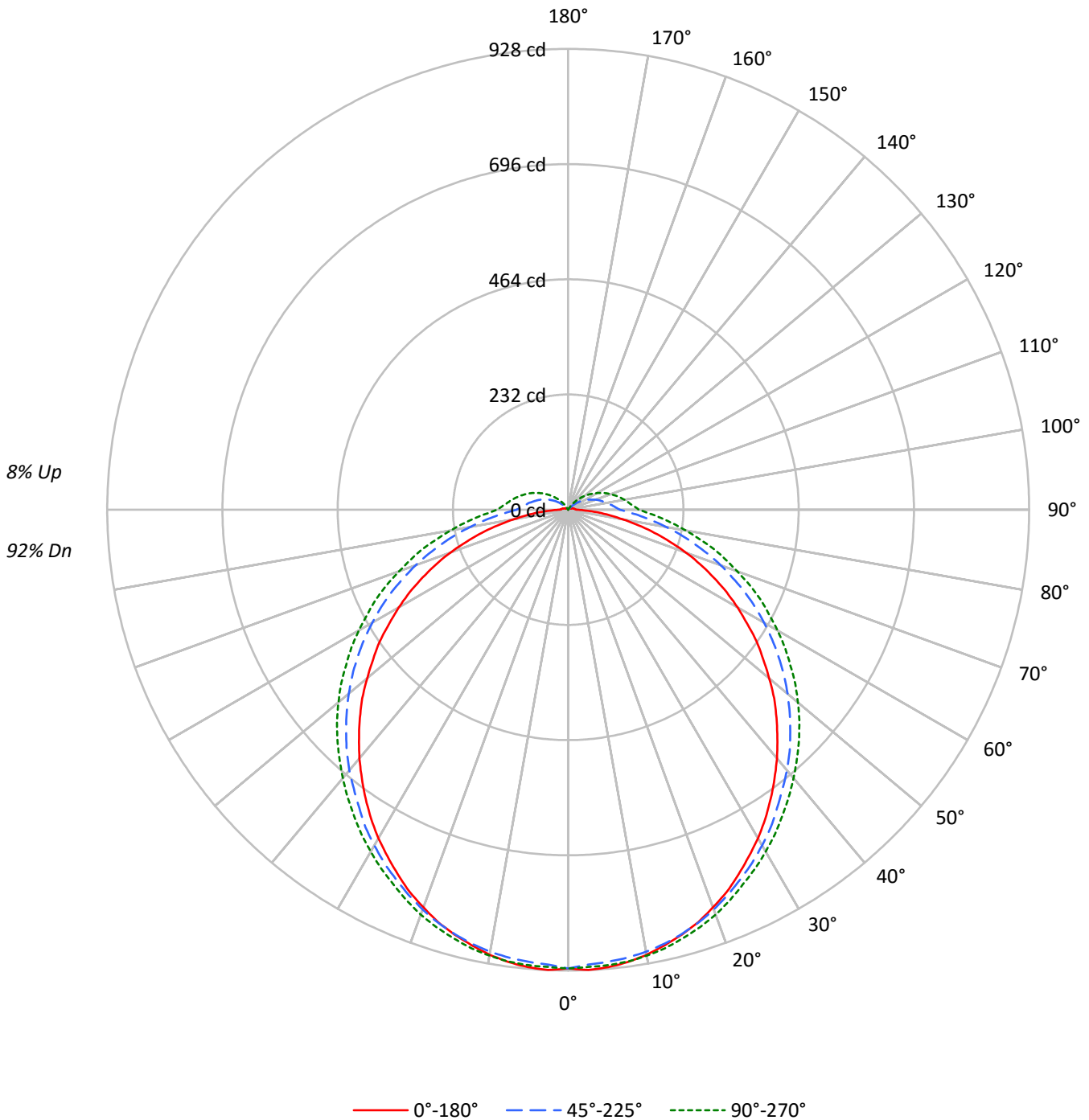
Input Watts (W): 31.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	8212	8212	8212
5°	8236	8013	8029
10°	8183	7877	7862
15°	8102	7718	7672
20°	7998	7547	7483
25°	7874	7351	7262
30°	7744	7168	7073
35°	7599	6964	6876
40°	7452	6790	6692
45°	7296	6602	6518
50°	7122	6412	6335
55°	6967	6211	6126
60°	6748	5985	5921
65°	6494	5733	5714
70°	6191	5447	5419
75°	5713	5094	5205
80°	5060	4757	4900
85°	4585	4482	4724



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.5	2.8
10°-20°	250.8	7.9
20°-30°	379.6	12.0
30°-40°	459.6	14.6
40°-50°	486.2	15.4
50°-60°	458.0	14.5
60°-70°	380.6	12.1
70°-80°	267.5	8.5
80°-90°	150.7	4.8
90°-100°	89.4	2.8
100°-110°	66.2	2.1
110°-120°	44.2	1.4
120°-130°	24.9	0.8
130°-140°	10.7	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°	717.8	22.7
0°-40°	1177.5	37.3
0°-60°	2121.6	67.2
0°-90°	2920.3	92.5
90°-120°	199.7	6.3
90°-150°	237.4	7.5
90°-180°	237.0	7.5
0°-180°	3157.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	924	924	924	924	924	
5°	925	921	914	922	921	88
15°	886	888	884	894	893	250
25°	811	818	821	832	832	374
35°	711	722	733	749	752	445
45°	593	612	632	651	657	458
55°	463	488	517	540	546	413
65°	323	355	392	416	427	320
75°	180	218	261	291	302	190
85°	56	99	146	178	188	58
90°	17	58	104	132	142	11
95°	14	47	90	119	127	11
105°	10	30	69	94	103	10
115°	7	16	48	71	80	7
125°	4	3	28	48	55	4
135°	2	2	9	26	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°	923.8	923.8	923.8	923.8	923.8
2.5°	927.7	924.8	916.9	922.8	921.8
5°	924.8	920.8	914.0	921.8	920.8
7.5°	918.9	915.9	910.0	918.9	917.9
10°	910.0	908.1	904.1	912.0	912.0
12.5°	898.3	898.3	895.3	904.1	904.1
15°	885.5	887.5	884.5	894.3	893.3
17.5°	870.8	872.7	871.8	881.6	881.6
20°	852.1	855.1	857.0	867.8	867.8
22.5°	833.5	837.4	839.4	851.1	851.1
25°	810.9	817.8	820.7	832.5	832.5
27.5°	787.3	796.2	802.0	812.8	814.8
30°	763.8	773.6	780.5	792.2	795.2
32.5°	738.2	748.1	758.9	770.6	774.6
35°	710.8	722.5	733.3	749.0	752.0
37.5°	682.3	696.0	708.8	725.5	729.4
40°	653.8	670.5	685.2	700.9	705.8
42.5°	623.4	640.1	659.7	676.4	681.3
45°	592.9	611.6	632.2	650.9	656.8
47.5°	562.5	582.1	604.7	624.4	631.2
50°	528.2	549.8	576.3	595.9	603.7
52.5°	494.8	518.3	547.8	567.4	576.3
55°	463.4	487.9	517.4	539.9	545.8
57.5°	427.0	454.5	486.9	511.5	517.4
60°	393.7	421.1	455.5	480.1	486.9
62.5°	359.3	388.8	424.1	448.6	455.5
65°	323.0	355.4	391.7	416.2	427.0
67.5°	287.6	320.0	358.3	385.8	394.6
70°	252.3	285.7	326.9	354.4	361.3
72.5°	215.0	251.3	293.5	322.0	331.8
75°	179.7	217.9	261.1	290.6	302.4
77.5°	145.3	185.5	230.7	261.1	269.0
80°	110.9	155.1	200.3	230.7	240.5
82.5°	83.4	124.7	171.8	204.2	212.0
85°	56.0	99.2	146.3	177.7	187.5
87.5°	33.4	77.6	122.7	152.2	162.0
90°	16.7	57.9	104.1	132.5	142.3
92.5°	14.7	52.0	96.2	124.7	134.5
95°	13.7	47.1	90.3	118.8	126.6
97.5°	12.8	43.2	84.4	111.9	120.7
100°	11.8	38.3	79.5	106.0	114.9
102.5°	10.8	34.4	73.6	100.1	109.0
105°	9.8	30.4	68.7	94.2	103.1
107.5°	8.8	26.5	63.8	88.4	97.2
110°	7.9	22.6	58.9	82.5	91.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	6.9	19.6	53.0	76.6	85.4
115°	6.9	15.7	48.1	70.7	79.5
117.5°	5.9	11.8	43.2	64.8	72.6
120°	5.9	8.8	38.3	58.9	66.8
122.5°	4.9	5.9	33.4	54.0	60.9
125°	3.9	2.9	28.5	48.1	55.0
127.5°	3.9	2.9	23.6	42.2	49.1
130°	2.9	2.9	18.7	36.3	43.2
132.5°	2.9	2.0	13.7	31.4	37.3
135°	2.0	2.0	8.8	25.5	31.4
137.5°	2.0	1.0	5.9	20.6	26.5
140°	2.0	1.0	2.0	15.7	20.6
142.5°	1.0	1.0	0.0	10.8	14.7
145°	1.0	0.0	0.0	5.9	9.8
147.5°	1.0	0.0	0.0	1.0	4.9
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)