

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: P243531

Luminaire Tested: **S124DR-H1020D830-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243531
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-H1020D830-X4F0-XX-UDD-D-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3650.6 lumens
Efficiency: N/A
Efficacy: 115.9 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

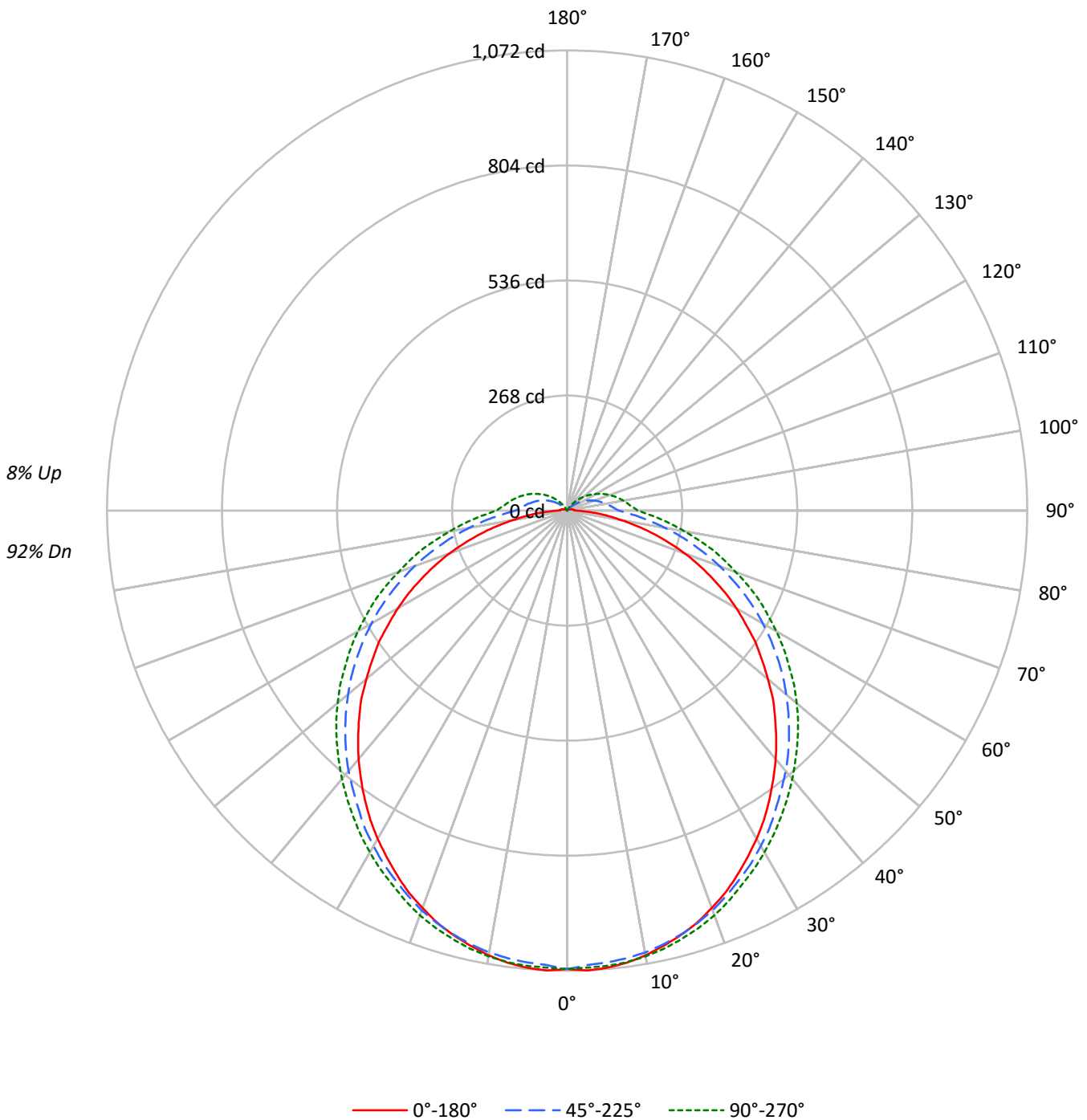
Input Watts (W): 31.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	9493	9493	9493
5°	9522	9263	9283
10°	9460	9108	9089
15°	9367	8923	8871
20°	9246	8725	8651
25°	9103	8498	8395
30°	8952	8286	8177
35°	8784	8051	7949
40°	8616	7850	7737
45°	8436	7633	7536
50°	8233	7413	7325
55°	8055	7180	7082
60°	7800	6920	6845
65°	7507	6628	6606
70°	7158	6296	6264
75°	6603	5890	6018
80°	5849	5497	5666
85°	5297	5181	5462



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.1	2.8
10°-20°	289.9	7.9
20°-30°	438.8	12.0
30°-40°	531.4	14.6
40°-50°	562.0	15.4
50°-60°	529.5	14.5
60°-70°	440.0	12.1
70°-80°	309.3	8.5
80°-90°	174.2	4.8
90°-100°	103.4	2.8
100°-110°	76.5	2.1
110°-120°	51.0	1.4
120°-130°	28.8	0.8
130°-140°	12.3	0.3
140°-150°	2.4	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	829.9	22.7
0°-40°	1361.2	37.3
0°-60°	2452.8	67.2
0°-90°	3376.2	92.5
90°-120°	230.9	6.3
90°-150°	274.4	7.5
90°-180°	274.0	7.5
0°-180°	3650.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1068	1068	1068	1068	1068	
5°	1069	1065	1057	1066	1065	101
15°	1024	1026	1023	1034	1033	289
25°	937	945	949	962	962	432
35°	822	835	848	866	869	514
45°	686	707	731	752	759	529
55°	536	564	598	624	631	477
65°	373	411	453	481	494	370
75°	208	252	302	336	350	220
85°	65	115	169	205	217	67
90°	19	67	120	153	165	13
95°	16	54	104	137	146	13
105°	11	35	79	109	119	12
115°	8	18	56	82	92	8
125°	4	3	33	56	64	4
135°	2	2	10	30	36	2
145°	1	0	0	7	11	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°	1068.0	1068.0	1068.0	1068.0	1068.0
2.5°	1072.5	1069.1	1060.0	1066.8	1065.7
5°	1069.1	1064.6	1056.6	1065.7	1064.6
7.5°	1062.3	1058.9	1052.1	1062.3	1061.1
10°	1052.1	1049.8	1045.3	1054.3	1054.3
12.5°	1038.4	1038.4	1035.0	1045.3	1045.3
15°	1023.7	1026.0	1022.6	1033.9	1032.8
17.5°	1006.7	1008.9	1007.8	1019.2	1019.2
20°	985.1	988.5	990.8	1003.3	1003.3
22.5°	963.5	968.1	970.4	984.0	984.0
25°	937.4	945.4	948.8	962.4	962.4
27.5°	910.2	920.4	927.2	939.7	942.0
30°	883.0	894.3	902.3	915.9	919.3
32.5°	853.5	864.8	877.3	890.9	895.4
35°	821.7	835.3	847.8	865.9	869.3
37.5°	788.8	804.7	819.4	838.7	843.2
40°	755.9	775.1	792.2	810.3	816.0
42.5°	720.7	740.0	762.7	782.0	787.6
45°	685.5	707.1	730.9	752.4	759.3
47.5°	650.3	673.0	699.1	721.8	729.8
50°	610.6	635.6	666.2	688.9	698.0
52.5°	572.0	599.2	633.3	656.0	666.2
55°	535.7	564.1	598.1	624.2	631.0
57.5°	493.7	525.5	562.9	591.3	598.1
60°	455.1	486.9	526.6	555.0	562.9
62.5°	415.4	449.4	490.3	518.7	526.6
65°	373.4	410.8	452.8	481.2	493.7
67.5°	332.5	370.0	414.2	446.0	456.2
70°	291.7	330.3	377.9	409.7	417.6
72.5°	248.5	290.5	339.3	372.3	383.6
75°	207.7	252.0	301.9	335.9	349.6
77.5°	168.0	214.5	266.7	301.9	311.0
80°	128.2	179.3	231.5	266.7	278.1
82.5°	96.5	144.1	198.6	236.1	245.1
85°	64.7	114.6	169.1	205.4	216.8
87.5°	38.6	89.7	141.9	175.9	187.3
90°	19.3	67.0	120.3	153.2	164.6
92.5°	17.0	60.2	111.2	144.1	155.5
95°	15.9	54.5	104.4	137.3	146.4
97.5°	14.8	49.9	97.6	129.4	139.6
100°	13.6	44.3	91.9	122.6	132.8
102.5°	12.5	39.7	85.1	115.8	126.0
105°	11.3	35.2	79.4	109.0	119.2
107.5°	10.2	30.6	73.8	102.1	112.4
110°	9.1	26.1	68.1	95.3	105.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	7.9	22.7	61.3	88.5	98.7
115°	7.9	18.2	55.6	81.7	91.9
117.5°	6.8	13.6	49.9	74.9	84.0
120°	6.8	10.2	44.3	68.1	77.2
122.5°	5.7	6.8	38.6	62.4	70.4
125°	4.5	3.4	32.9	55.6	63.6
127.5°	4.5	3.4	27.2	48.8	56.7
130°	3.4	3.4	21.6	42.0	49.9
132.5°	3.4	2.3	15.9	36.3	43.1
135°	2.3	2.3	10.2	29.5	36.3
137.5°	2.3	1.1	6.8	23.8	30.6
140°	2.3	1.1	2.3	18.2	23.8
142.5°	1.1	1.1	0.0	12.5	17.0
145°	1.1	0.0	0.0	6.8	11.3
147.5°	1.1	0.0	0.0	1.1	5.7
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)