

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: P243355

Luminaire Tested: **S123DR-H1165D927-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243355
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-54)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DR-H1165D927-X4F0-XX-UDD-D-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3627.0 lumens
Efficiency: N/A
Efficacy: 96.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.23' x L: 3.88' x H: 0.08')
CIE Type: Direct

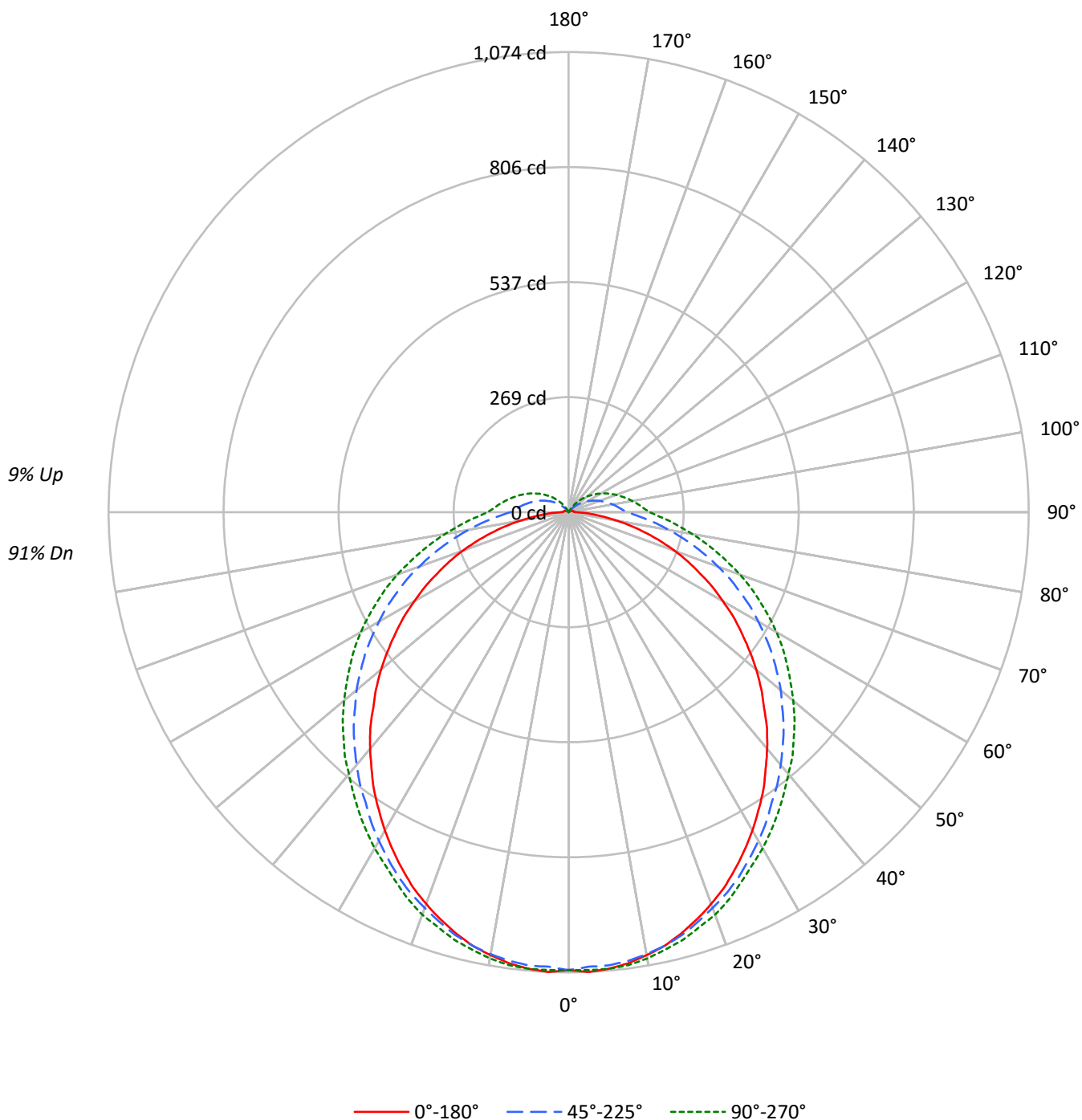
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					0
RW	70	50	30	10	70	50	30	10		50	30	10		50	30	10		50	30	10
RCR																				
0	117	117	117	117	113	113	113	113		106	106	106		100	100	100		94	94	94
1	105	100	95	90	101	96	92	88		91	87	84		85	82	80		80	78	76
2	95	86	79	72	91	83	77	71		78	73	68		74	69	65		69	66	62
3	86	75	66	60	83	73	65	58		69	62	56		65	59	54		61	56	52
4	79	66	57	50	76	64	56	49		61	53	48		57	51	46		54	49	45
5	72	59	50	43	70	57	49	42		54	47	41		51	45	40		49	43	39
6	67	53	44	37	64	52	43	37		49	41	36		46	40	35		44	38	34
7	62	48	39	33	60	47	38	32		44	37	32		42	36	31		40	34	30
8	57	44	35	29	55	43	34	29		41	33	28		39	32	27		37	31	27
9	54	40	32	26	52	39	31	26		37	30	25		36	29	25		34	28	24
10	50	37	29	24	49	36	29	23		35	28	23		33	27	22		32	26	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12953	12953	12953
5°	12991	12620	12614
10°	12871	12301	12232
15°	12694	11950	11812
20°	12451	11534	11386
25°	12173	11148	10894
30°	11862	10715	10479
35°	11550	10275	10068
40°	11205	9918	9672
45°	10827	9563	9343
50°	10509	9201	9001
55°	10120	8832	8664
60°	9713	8426	8337
65°	9286	7991	7937
70°	8801	7523	7547
75°	8068	7014	7085
80°	7142	6510	6681
85°	6341	6104	6371

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.4	2.8
10°-20°	289.3	8.0
20°-30°	433.2	11.9
30°-40°	518.3	14.3
40°-50°	543.5	15.0
50°-60°	511.0	14.1
60°-70°	427.6	11.8
70°-80°	306.9	8.5
80°-90°	183.8	5.1
90°-100°	116.5	3.2
100°-110°	85.9	2.4
110°-120°	57.5	1.6
120°-130°	33.2	0.9
130°-140°	15.3	0.4
140°-150°	3.5	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	823.9	22.7
0°-40°	1342.2	37.0
0°-60°	2396.7	66.1
0°-90°	3315.1	91.4
90°-120°	259.9	7.2
90°-150°	311.8	8.6
90°-180°	312.0	8.6
0°-180°	3627.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1069	1069	1069	1069	1069	
5°	1070	1069	1062	1071	1070	101
15°	1017	1024	1022	1035	1033	287
25°	919	932	939	954	953	423
35°	792	811	827	848	854	495
45°	645	678	710	734	743	499
55°	494	535	580	612	623	442
65°	339	389	441	480	492	336
75°	186	243	302	343	357	198
85°	57	116	180	222	236	58
90°	16	74	136	177	189	11
95°	12	60	118	156	168	10
105°	9	39	90	124	134	10
115°	6	20	64	92	102	6
125°	4	4	39	64	72	4
135°	2	1	17	37	44	2
145°	1	0	0	11	16	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°	1068.6	1068.6	1068.6	1068.6	1068.6
2.5°	1074.2	1070.8	1061.9	1072.0	1069.7
5°	1069.7	1068.6	1061.9	1070.8	1069.7
7.5°	1061.9	1061.9	1056.4	1066.4	1066.4
10°	1049.7	1053.0	1047.4	1058.6	1057.5
12.5°	1036.3	1040.8	1036.3	1048.6	1045.2
15°	1017.4	1024.0	1021.8	1035.2	1033.0
17.5°	996.2	1004.0	1002.9	1016.2	1015.1
20°	972.8	982.8	982.8	996.2	999.5
22.5°	948.3	959.4	962.8	976.1	978.4
25°	919.3	931.6	939.4	953.8	952.7
27.5°	889.2	903.7	912.6	928.2	928.2
30°	858.0	874.7	885.9	902.6	905.9
32.5°	824.6	844.6	858.0	875.8	880.3
35°	792.3	811.2	826.8	848.0	853.6
37.5°	755.5	778.9	800.1	822.4	825.7
40°	720.9	746.6	770.0	793.4	797.8
42.5°	685.3	712.0	739.9	763.3	773.3
45°	645.2	677.5	709.8	734.3	743.2
47.5°	609.5	641.8	676.4	705.3	715.4
50°	571.6	605.1	646.3	674.1	684.2
52.5°	532.6	569.4	612.9	642.9	653.0
55°	493.6	534.9	580.5	611.7	622.9
57.5°	456.9	498.1	546.0	580.5	592.8
60°	415.6	461.3	511.5	547.1	560.5
62.5°	378.9	425.7	478.0	513.7	527.1
65°	338.7	388.9	441.3	480.3	492.5
67.5°	302.0	351.0	407.8	446.8	460.2
70°	263.0	314.2	371.1	411.2	425.7
72.5°	224.0	278.6	336.5	377.7	390.0
75°	186.1	242.9	302.0	343.2	356.6
77.5°	150.4	207.3	268.5	309.8	324.3
80°	114.8	173.8	237.3	278.6	293.1
82.5°	83.6	143.7	208.4	248.5	261.9
85°	56.8	115.9	180.5	221.7	236.2
87.5°	33.4	93.6	156.0	197.2	209.5
90°	15.6	73.5	135.9	177.2	189.4
92.5°	14.5	65.7	125.9	164.9	177.2
95°	12.3	60.2	118.1	156.0	168.3
97.5°	12.3	54.6	111.4	148.2	159.3
100°	11.1	49.0	104.7	139.3	150.4
102.5°	10.0	43.5	96.9	131.5	142.6
105°	8.9	39.0	90.3	123.7	133.7
107.5°	7.8	33.4	83.6	115.9	125.9
110°	7.8	29.0	76.9	108.1	118.1

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	6.7	24.5	70.2	100.3	110.3
115°	5.6	20.1	63.5	92.5	102.5
117.5°	5.6	15.6	56.8	85.8	94.7
120°	5.6	12.3	51.3	78.0	86.9
122.5°	4.5	7.8	45.7	71.3	80.2
125°	4.5	4.5	39.0	63.5	72.4
127.5°	3.3	2.2	33.4	56.8	64.6
130°	3.3	2.2	27.9	50.1	57.9
132.5°	2.2	2.2	22.3	43.5	51.3
135°	2.2	1.1	16.7	36.8	43.5
137.5°	2.2	1.1	11.1	30.1	36.8
140°	1.1	1.1	5.6	23.4	30.1
142.5°	1.1	0.0	1.1	17.8	23.4
145°	1.1	0.0	0.0	11.1	15.6
147.5°	1.1	0.0	0.0	5.6	10.0
150°	1.1	0.0	0.0	0.0	3.3
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)