

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: P243378

Luminaire Tested: **S123DR-H1000D935-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243378
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-H1000D935-X4F0-XX-UDD-D-W
Description: DEFINE 3 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: 3374.5 lumens
Efficiency: N/A
Efficacy: 107.1 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

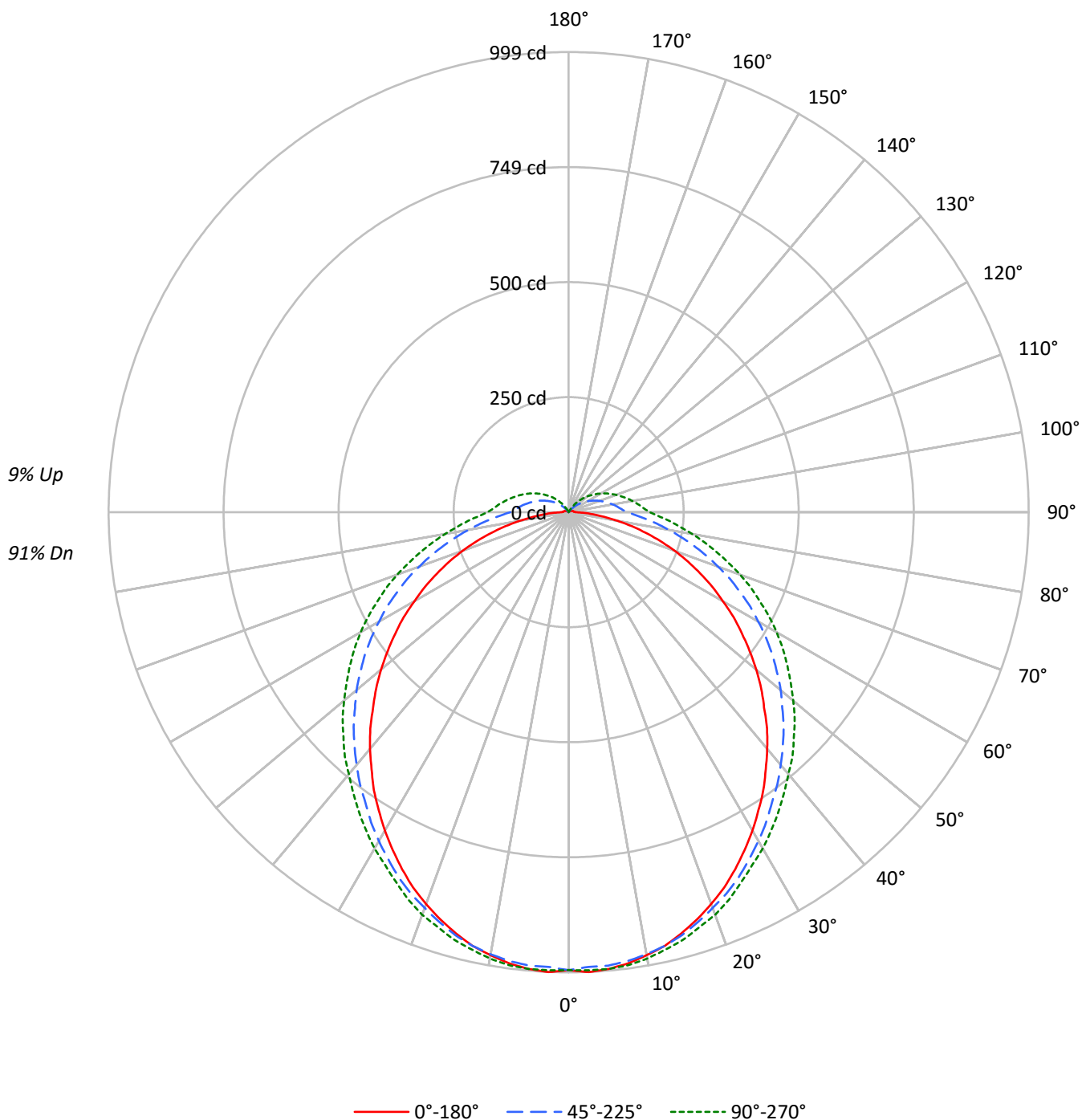
Input Watts (W): 31.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				10			
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	113	113	113	113	106	106	106	100	100	100	94	94	94	91		
1	105	100	95	90	101	96	92	88	91	87	84	85	82	80	80	78	76	73		
2	95	86	79	72	91	83	77	71	78	73	68	74	69	65	69	66	62	60		
3	86	75	66	60	83	73	65	58	69	62	56	65	59	54	61	56	52	50		
4	79	66	57	50	76	64	56	49	61	53	48	57	51	46	54	49	45	42		
5	72	59	50	43	70	57	49	42	54	47	41	51	45	40	49	43	39	36		
6	67	53	44	37	64	52	43	37	49	41	36	46	40	35	44	38	34	31		
7	62	48	39	33	60	47	38	32	44	37	32	42	36	31	40	34	30	28		
8	57	44	35	29	55	43	34	29	41	33	28	39	32	27	37	31	27	25		
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	28	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°	12051	12051	12051
5°	12088	11742	11737
10°	11975	11445	11380
15°	11809	11119	10989
20°	11584	10731	10593
25°	11325	10372	10136
30°	11036	9969	9751
35°	10745	9561	9366
40°	10426	9227	9000
45°	10074	8898	8693
50°	9778	8561	8375
55°	9417	8218	8061
60°	9038	7839	7757
65°	8642	7433	7384
70°	8188	6998	7021
75°	7504	6527	6593
80°	6645	6057	6216
85°	5906	5678	5929

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.4	2.8
10°-20°	269.1	8.0
20°-30°	403.0	11.9
30°-40°	482.3	14.3
40°-50°	505.7	15.0
50°-60°	475.4	14.1
60°-70°	397.9	11.8
70°-80°	285.5	8.5
80°-90°	171.0	5.1
90°-100°	108.4	3.2
100°-110°	79.9	2.4
110°-120°	53.5	1.6
120°-130°	30.9	0.9
130°-140°	14.2	0.4
140°-150°	3.3	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	766.5	22.7
0°-40°	1248.8	37.0
0°-60°	2229.9	66.1
0°-90°	3084.3	91.4
90°-120°	241.8	7.2
90°-150°	290.2	8.6
90°-180°	290.0	8.6
0°-180°	3374.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	994	994	994	994	994	
5°	995	994	988	996	995	94
15°	946	953	951	963	961	267
25°	855	867	874	887	886	394
35°	737	755	769	789	794	460
45°	600	630	660	683	692	464
55°	459	498	540	569	580	411
65°	315	362	410	447	458	313
75°	173	226	281	319	332	184
85°	53	108	168	206	220	54
90°	14	68	126	165	176	10
95°	11	56	110	145	156	9
105°	8	36	84	115	124	9
115°	5	19	59	86	95	6
125°	4	4	36	59	67	3
135°	2	1	16	34	40	2
145°	1	0	0	10	14	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°	994.2	994.2	994.2	994.2	994.2
2.5°	999.4	996.3	988.0	997.3	995.3
5°	995.3	994.2	988.0	996.3	995.3
7.5°	988.0	988.0	982.8	992.1	992.1
10°	976.6	979.7	974.5	984.9	983.9
12.5°	964.2	968.3	964.2	975.6	972.5
15°	946.5	952.8	950.7	963.1	961.0
17.5°	926.8	934.1	933.1	945.5	944.5
20°	905.1	914.4	914.4	926.8	929.9
22.5°	882.3	892.6	895.7	908.2	910.2
25°	855.3	866.7	874.0	887.4	886.4
27.5°	827.3	840.8	849.1	863.6	863.6
30°	798.3	813.8	824.2	839.7	842.9
32.5°	767.2	785.8	798.3	814.9	819.0
35°	737.1	754.7	769.3	789.0	794.1
37.5°	702.9	724.7	744.4	765.1	768.2
40°	670.8	694.6	716.4	738.2	742.3
42.5°	637.6	662.5	688.4	710.2	719.5
45°	600.3	630.3	660.4	683.2	691.5
47.5°	567.1	597.2	629.3	656.2	665.6
50°	531.8	562.9	601.3	627.2	636.6
52.5°	495.6	529.8	570.2	598.2	607.5
55°	459.3	497.6	540.1	569.2	579.5
57.5°	425.1	463.4	508.0	540.1	551.5
60°	386.7	429.2	475.9	509.0	521.5
62.5°	352.5	396.0	444.8	477.9	490.4
65°	315.2	361.8	410.5	446.8	458.2
67.5°	281.0	326.6	379.4	415.7	428.2
70°	244.7	292.4	345.2	382.6	396.0
72.5°	208.4	259.2	313.1	351.5	362.9
75°	173.1	226.0	281.0	319.3	331.8
77.5°	140.0	192.8	249.9	288.2	301.7
80°	106.8	161.7	220.8	259.2	272.7
82.5°	77.8	133.7	193.9	231.2	243.6
85°	52.9	107.8	167.9	206.3	219.8
87.5°	31.1	87.1	145.1	183.5	194.9
90°	14.5	68.4	126.5	164.8	176.2
92.5°	13.5	61.2	117.2	153.4	164.8
95°	11.4	56.0	109.9	145.1	156.5
97.5°	11.4	50.8	103.7	137.9	148.3
100°	10.4	45.6	97.5	129.6	140.0
102.5°	9.3	40.4	90.2	122.3	132.7
105°	8.3	36.3	84.0	115.1	124.4
107.5°	7.3	31.1	77.8	107.8	117.2
110°	7.3	27.0	71.5	100.6	109.9

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	6.2	22.8	65.3	93.3	102.6
115°	5.2	18.7	59.1	86.0	95.4
117.5°	5.2	14.5	52.9	79.8	88.1
120°	5.2	11.4	47.7	72.6	80.9
122.5°	4.1	7.3	42.5	66.4	74.6
125°	4.1	4.1	36.3	59.1	67.4
127.5°	3.1	2.1	31.1	52.9	60.1
130°	3.1	2.1	25.9	46.7	53.9
132.5°	2.1	2.1	20.7	40.4	47.7
135°	2.1	1.0	15.6	34.2	40.4
137.5°	2.1	1.0	10.4	28.0	34.2
140°	1.0	1.0	5.2	21.8	28.0
142.5°	1.0	0.0	1.0	16.6	21.8
145°	1.0	0.0	0.0	10.4	14.5
147.5°	1.0	0.0	0.0	5.2	9.3
150°	1.0	0.0	0.0	0.0	3.1
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)