

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: P243383

Luminaire Tested: **S123DR-H1000D940-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243383
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-H1000D940-X4F0-XX-UDD-D-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3494.9 lumens
Efficiency: N/A
Efficacy: 110.9 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

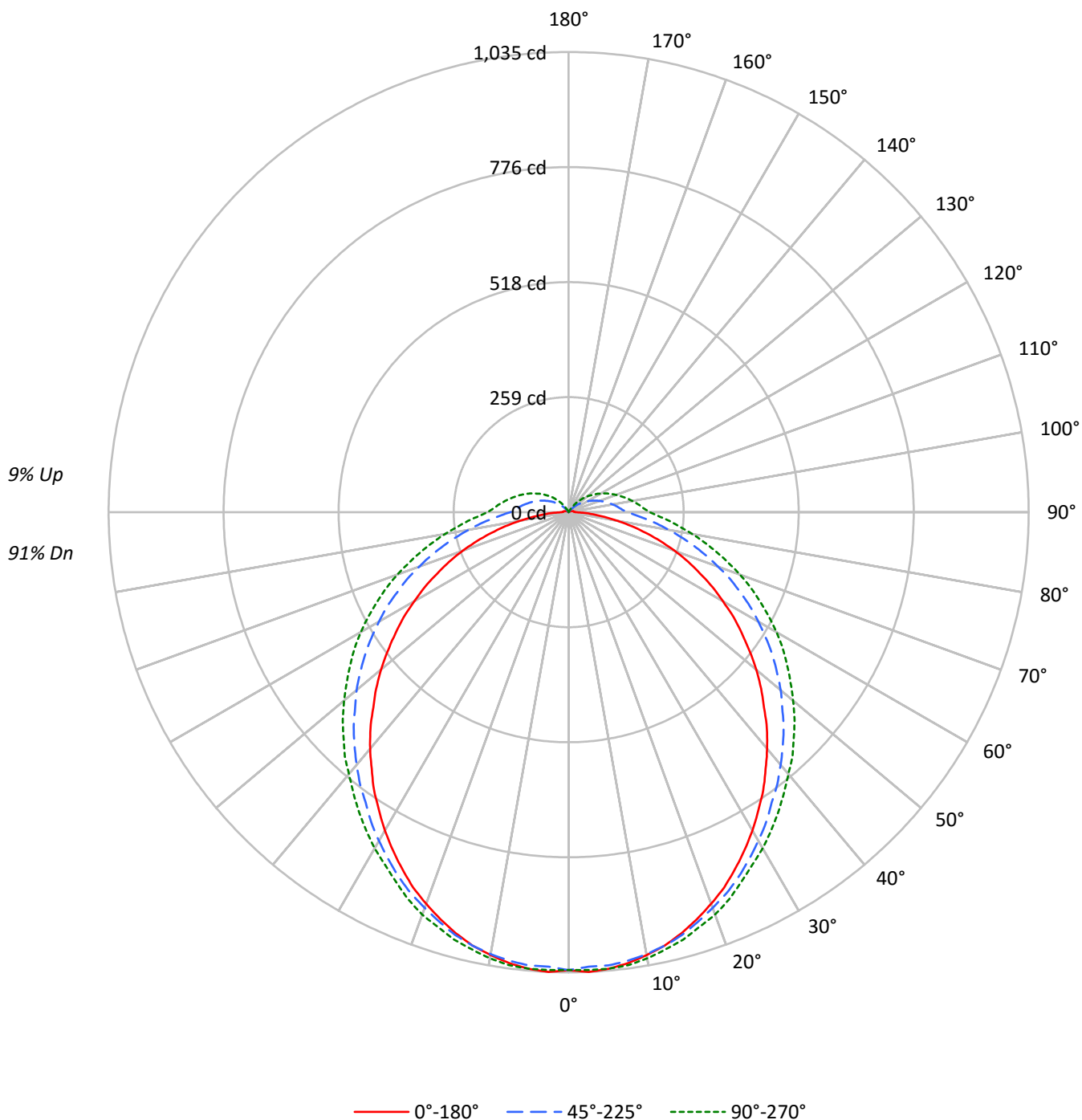
Input Watts (W): 31.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10
RCR																				
0	117	117	117	117	113	113	113	113	106	106	106	100	100	100	94	94	94	94	94	91
1	105	100	95	90	101	96	92	88	91	87	84	85	82	80	80	78	76	76	76	73
2	95	86	79	72	91	83	77	71	78	73	68	74	69	65	69	66	62	62	62	60
3	86	75	66	60	83	73	65	58	69	62	56	65	59	54	61	56	52	52	52	50
4	79	66	57	50	76	64	56	49	61	53	48	57	51	46	54	49	45	45	45	42
5	72	59	50	43	70	57	49	42	54	47	41	51	45	40	49	43	39	39	39	36
6	67	53	44	37	64	52	43	37	49	41	36	46	40	35	44	38	34	34	34	31
7	62	48	39	33	60	47	38	32	44	37	32	42	36	31	40	34	30	30	30	28
8	57	44	35	29	55	43	34	29	41	33	28	39	32	27	37	31	27	27	27	25
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	28	24	24	24	22
10	50	37	29	24	49	36	29	23	35	28	23	33	27	22	32	26	22	22	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12481	12481	12481
5°	12519	12160	12156
10°	12402	11853	11785
15°	12231	11515	11381
20°	11996	11114	10971
25°	11729	10741	10498
30°	11430	10324	10098
35°	11129	9901	9701
40°	10797	9556	9321
45°	10433	9216	9003
50°	10127	8867	8674
55°	9753	8511	8348
60°	9360	8118	8034
65°	8949	7699	7648
70°	8480	7247	7272
75°	7773	6759	6827
80°	6881	6274	6437
85°	6118	5881	6139

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.7	2.8
10°-20°	278.7	8.0
20°-30°	417.4	11.9
30°-40°	499.5	14.3
40°-50°	523.8	15.0
50°-60°	492.4	14.1
60°-70°	412.1	11.8
70°-80°	295.7	8.5
80°-90°	177.1	5.1
90°-100°	112.3	3.2
100°-110°	82.8	2.4
110°-120°	55.4	1.6
120°-130°	31.9	0.9
130°-140°	14.7	0.4
140°-150°	3.4	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	793.9	22.7
0°-40°	1293.3	37.0
0°-60°	2309.5	66.1
0°-90°	3194.4	91.4
90°-120°	250.4	7.2
90°-150°	300.5	8.6
90°-180°	301.0	8.6
0°-180°	3494.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1030	1030	1030	1030	1030	
5°	1031	1030	1023	1032	1031	98
15°	980	987	985	998	995	276
25°	886	898	905	919	918	408
35°	763	782	797	817	822	477
45°	622	653	684	708	716	481
55°	476	515	559	590	600	426
65°	326	375	425	463	475	324
75°	179	234	291	331	344	190
85°	55	112	174	214	228	56
90°	15	71	131	171	182	10
95°	12	58	114	150	162	10
105°	9	38	87	119	129	9
115°	5	19	61	89	99	6
125°	4	4	38	61	70	4
135°	2	1	16	35	42	2
145°	1	0	0	11	15	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°	1029.7	1029.7	1029.7	1029.7	1029.7
2.5°	1035.1	1031.8	1023.2	1032.9	1030.8
5°	1030.8	1029.7	1023.2	1031.8	1030.8
7.5°	1023.2	1023.2	1017.9	1027.5	1027.5
10°	1011.4	1014.7	1009.3	1020.0	1018.9
12.5°	998.5	1002.8	998.5	1010.4	1007.1
15°	980.3	986.7	984.6	997.5	995.3
17.5°	959.9	967.4	966.3	979.2	978.1
20°	937.3	947.0	947.0	959.9	963.1
22.5°	913.7	924.5	927.7	940.6	942.7
25°	885.8	897.6	905.1	919.1	918.0
27.5°	856.8	870.8	879.4	894.4	894.4
30°	826.8	842.9	853.6	869.7	872.9
32.5°	794.5	813.9	826.8	843.9	848.2
35°	763.4	781.7	796.7	817.1	822.5
37.5°	728.0	750.5	770.9	792.4	795.6
40°	694.7	719.4	741.9	764.5	768.8
42.5°	660.3	686.1	712.9	735.5	745.2
45°	621.7	652.8	684.0	707.6	716.2
47.5°	587.3	618.5	651.7	679.7	689.3
50°	550.8	583.0	622.8	649.6	659.3
52.5°	513.2	548.7	590.5	619.5	629.2
55°	475.7	515.4	559.4	589.5	600.2
57.5°	440.2	479.9	526.1	559.4	571.2
60°	400.5	444.5	492.8	527.2	540.1
62.5°	365.1	410.2	460.6	495.0	507.9
65°	326.4	374.7	425.2	462.8	474.6
67.5°	291.0	338.2	393.0	430.6	443.4
70°	253.4	302.8	357.5	396.2	410.2
72.5°	215.8	268.4	324.3	364.0	375.8
75°	179.3	234.1	291.0	330.7	343.6
77.5°	145.0	199.7	258.8	298.5	312.4
80°	110.6	167.5	228.7	268.4	282.4
82.5°	80.5	138.5	200.8	239.4	252.3
85°	54.8	111.7	173.9	213.7	227.6
87.5°	32.2	90.2	150.3	190.0	201.9
90°	15.0	70.9	131.0	170.7	182.5
92.5°	14.0	63.3	121.3	158.9	170.7
95°	11.8	58.0	113.8	150.3	162.1
97.5°	11.8	52.6	107.4	142.8	153.5
100°	10.7	47.2	100.9	134.2	145.0
102.5°	9.7	41.9	93.4	126.7	137.4
105°	8.6	37.6	87.0	119.2	128.8
107.5°	7.5	32.2	80.5	111.7	121.3
110°	7.5	27.9	74.1	104.1	113.8

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	6.4	23.6	67.6	96.6	106.3
115°	5.4	19.3	61.2	89.1	98.8
117.5°	5.4	15.0	54.8	82.7	91.3
120°	5.4	11.8	49.4	75.2	83.7
122.5°	4.3	7.5	44.0	68.7	77.3
125°	4.3	4.3	37.6	61.2	69.8
127.5°	3.2	2.1	32.2	54.8	62.3
130°	3.2	2.1	26.8	48.3	55.8
132.5°	2.1	2.1	21.5	41.9	49.4
135°	2.1	1.1	16.1	35.4	41.9
137.5°	2.1	1.1	10.7	29.0	35.4
140°	1.1	1.1	5.4	22.5	29.0
142.5°	1.1	0.0	1.1	17.2	22.5
145°	1.1	0.0	0.0	10.7	15.0
147.5°	1.1	0.0	0.0	5.4	9.7
150°	1.1	0.0	0.0	0.0	3.2
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)