

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: P243379

Luminaire Tested: **S123DR-H1165D935-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243379
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-H1165D935-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: 3942.1 lumens
Efficiency: N/A
Efficacy: 104.6 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

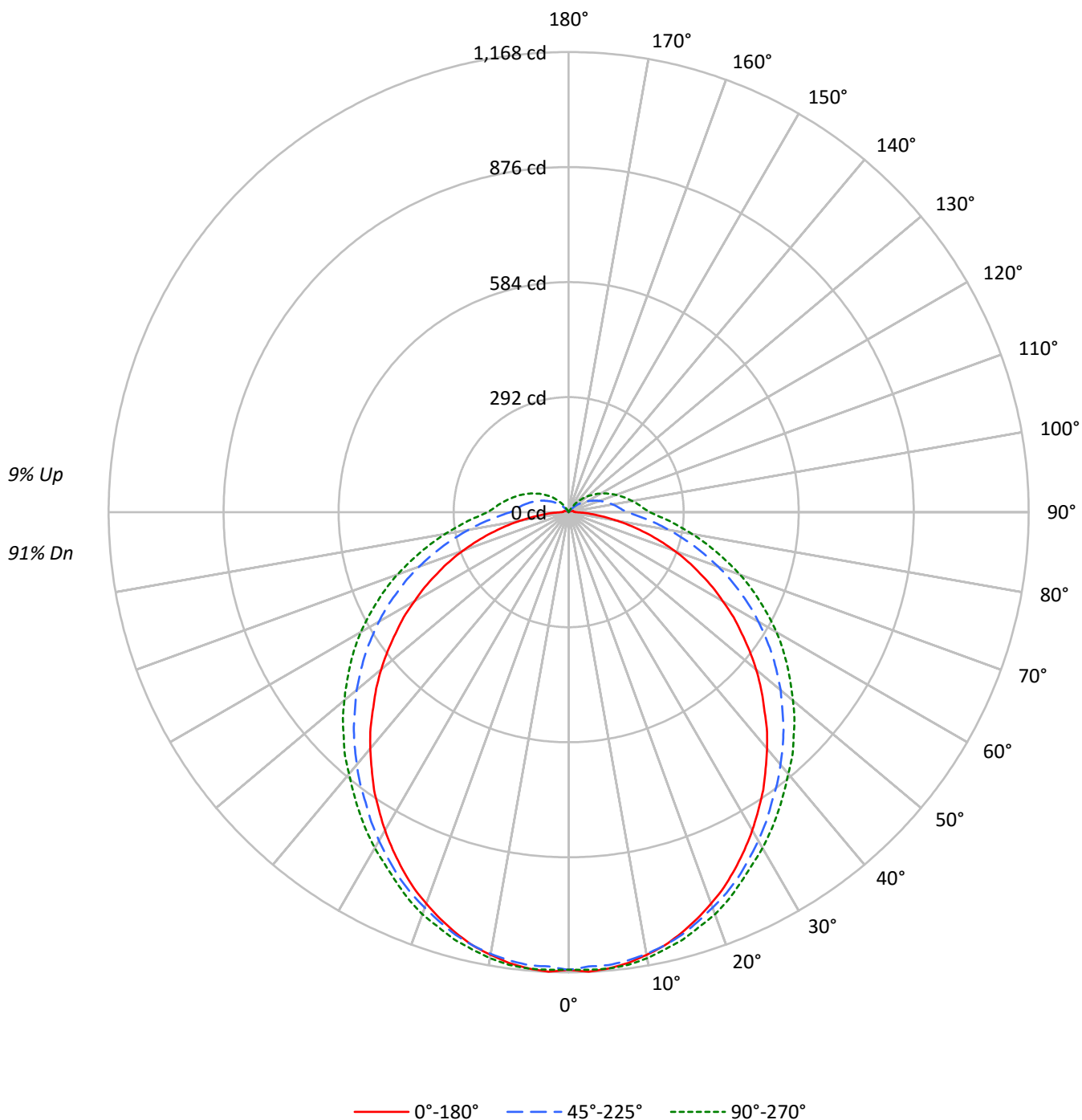
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				10
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°	14078	14078	14078
5°	14121	13717	13711
10°	13989	13370	13294
15°	13796	12989	12838
20°	13532	12536	12376
25°	13231	12117	11841
30°	12892	11645	11390
35°	12553	11167	10942
40°	12179	10779	10513
45°	11767	10394	10155
50°	11423	10000	9783
55°	11000	9601	9417
60°	10557	9157	9061
65°	10095	8684	8626
70°	9564	8176	8201
75°	8770	7623	7701
80°	7758	7078	7260
85°	6899	6635	6927

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.3	2.8
10°-20°	314.4	8.0
20°-30°	470.8	11.9
30°-40°	563.4	14.3
40°-50°	590.8	15.0
50°-60°	555.4	14.1
60°-70°	464.8	11.8
70°-80°	333.6	8.5
80°-90°	199.8	5.1
90°-100°	126.7	3.2
100°-110°	93.4	2.4
110°-120°	62.5	1.6
120°-130°	36.0	0.9
130°-140°	16.6	0.4
140°-150°	3.8	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	895.5	22.7
0°-40°	1458.8	37.0
0°-60°	2604.9	66.1
0°-90°	3603.1	91.4
90°-120°	282.5	7.2
90°-150°	339.0	8.6
90°-180°	339.0	8.6
0°-180°	3942.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1161	1161	1161	1161	1161	
5°	1163	1161	1154	1164	1163	110
15°	1106	1113	1111	1125	1123	312
25°	999	1012	1021	1037	1036	460
35°	861	882	899	922	928	538
45°	701	736	772	798	808	543
55°	536	581	631	665	677	480
65°	368	423	480	522	535	365
75°	202	264	328	373	388	215
85°	62	126	196	241	257	63
90°	17	80	148	193	206	12
95°	13	65	128	170	183	11
105°	10	42	98	134	145	10
115°	6	22	69	100	111	7
125°	5	5	42	69	79	4
135°	2	1	18	40	47	2
145°	1	0	0	12	17	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

TEST NUMBER: P243379

CATALOG NUMBER: S123DR-H1165D935-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1161.4	1161.4	1161.4	1161.4	1161.4
2.5°	1167.5	1163.9	1154.2	1165.1	1162.7
5°	1162.7	1161.4	1154.2	1163.9	1162.7
7.5°	1154.2	1154.2	1148.1	1159.0	1159.0
10°	1140.9	1144.5	1138.4	1150.5	1149.3
12.5°	1126.3	1131.2	1126.3	1139.6	1136.0
15°	1105.7	1113.0	1110.6	1125.1	1122.7
17.5°	1082.7	1091.2	1090.0	1104.5	1103.3
20°	1057.3	1068.2	1068.2	1082.7	1086.4
22.5°	1030.6	1042.8	1046.4	1060.9	1063.3
25°	999.2	1012.5	1021.0	1036.7	1035.5
27.5°	966.5	982.2	991.9	1008.8	1008.8
30°	932.5	950.7	962.8	981.0	984.6
32.5°	896.2	918.0	932.5	951.9	956.8
35°	861.1	881.7	898.6	921.6	927.7
37.5°	821.1	846.6	869.6	893.8	897.4
40°	783.6	811.4	836.9	862.3	867.1
42.5°	744.8	773.9	804.2	829.6	840.5
45°	701.2	736.3	771.5	798.1	807.8
47.5°	662.5	697.6	735.1	766.6	777.5
50°	621.3	657.6	702.4	732.7	743.6
52.5°	578.9	618.9	666.1	698.8	709.7
55°	536.5	581.3	631.0	664.9	677.0
57.5°	496.5	541.4	593.4	631.0	644.3
60°	451.7	501.4	555.9	594.6	609.2
62.5°	411.8	462.6	519.6	558.3	572.8
65°	368.2	422.7	479.6	522.0	535.3
67.5°	328.2	381.5	443.3	485.6	500.2
70°	285.8	341.5	403.3	446.9	462.6
72.5°	243.4	302.8	365.8	410.6	423.9
75°	202.3	264.0	328.2	373.0	387.6
77.5°	163.5	225.3	291.9	336.7	352.4
80°	124.7	188.9	258.0	302.8	318.5
82.5°	90.8	156.2	226.5	270.1	284.6
85°	61.8	126.0	196.2	241.0	256.8
87.5°	36.3	101.7	169.6	214.4	227.7
90°	17.0	79.9	147.8	192.6	205.9
92.5°	15.7	71.5	136.9	179.2	192.6
95°	13.3	65.4	128.4	169.6	182.9
97.5°	13.3	59.3	121.1	161.1	173.2
100°	12.1	53.3	113.8	151.4	163.5
102.5°	10.9	47.2	105.4	142.9	155.0
105°	9.7	42.4	98.1	134.4	145.3
107.5°	8.5	36.3	90.8	126.0	136.9
110°	8.5	31.5	83.6	117.5	128.4

TEST NUMBER: P243379

CATALOG NUMBER: S123DR-H1165D935-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	7.3	26.6	76.3	109.0	119.9
115°	6.1	21.8	69.0	100.5	111.4
117.5°	6.1	17.0	61.8	93.3	102.9
120°	6.1	13.3	55.7	84.8	94.5
122.5°	4.8	8.5	49.7	77.5	87.2
125°	4.8	4.8	42.4	69.0	78.7
127.5°	3.6	2.4	36.3	61.8	70.2
130°	3.6	2.4	30.3	54.5	63.0
132.5°	2.4	2.4	24.2	47.2	55.7
135°	2.4	1.2	18.2	40.0	47.2
137.5°	2.4	1.2	12.1	32.7	40.0
140°	1.2	1.2	6.1	25.4	32.7
142.5°	1.2	0.0	1.2	19.4	25.4
145°	1.2	0.0	0.0	12.1	17.0
147.5°	1.2	0.0	0.0	6.1	10.9
150°	1.2	0.0	0.0	0.0	3.6
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)