

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: P242507

Luminaire Tested: **S123DR-S775D840-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242507
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-15)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DR-S775D840-X4F0-XX-UDD-D-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3115.6 lumens
Efficiency: N/A
Efficacy: 118.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.23' x L: 3.88' x H: 0.08')
CIE Type: Direct

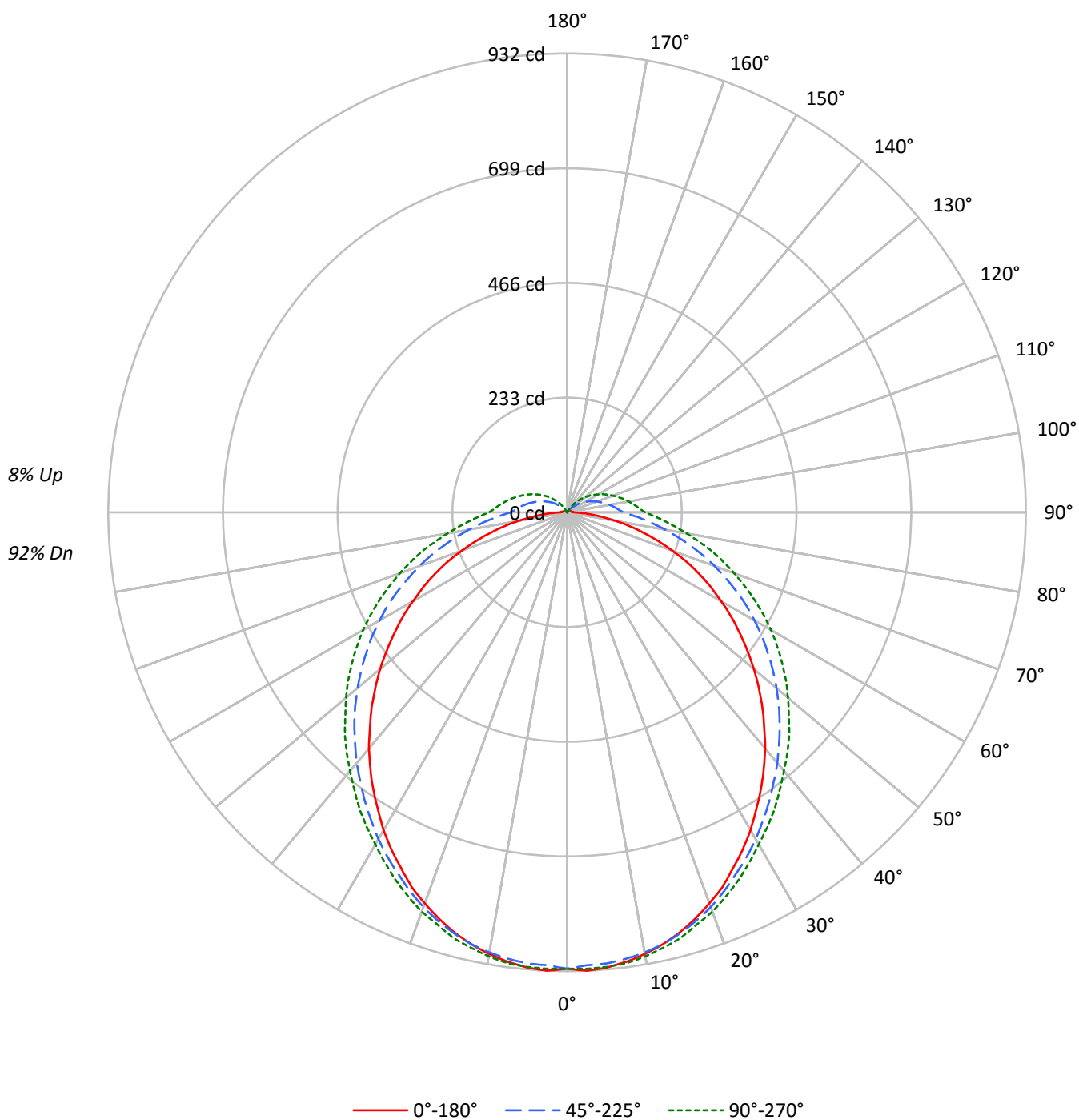
Input Watts (W): 26.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P242507

CATALOG NUMBER: S123DR-S775D840-X4F0-XX-UDD-D-W

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	102	97	92	88	91	87	84	85	82	80	80	78	76
2	95	86	79	72	92	83	77	71	79	73	68	74	69	65	70	66	63
3	86	75	67	60	83	73	65	59	69	62	56	65	59	54	61	56	52
4	79	66	57	50	76	64	56	49	61	54	48	57	51	46	54	49	45
5	72	59	50	43	70	58	49	42	54	47	41	52	45	40	49	43	39
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	44	38	34
7	62	48	39	33	60	47	38	32	45	37	32	42	36	31	40	35	30
8	58	44	35	29	56	43	35	29	41	33	28	39	32	28	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	24	35	28	23	33	27	23	32	26	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11238	11238	11238
5°	11271	10934	10933
10°	11169	10663	10594
15°	11025	10359	10231
20°	10819	10014	9835
25°	10564	9623	9424
30°	10304	9271	9007
35°	10011	8898	8671
40°	9731	8559	8313
45°	9423	8232	8023
50°	9116	7907	7706
55°	8779	7576	7417
60°	8449	7236	7120
65°	8113	6875	6770
70°	7603	6469	6409
75°	6963	6004	6040
80°	6222	5542	5617
85°	5526	5191	5338

TEST NUMBER: P242507

CATALOG NUMBER: S123DR-S775D840-X4F0-XX-UDD-D-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.9	2.8
10°-20°	250.7	8.0
20°-30°	374.9	12.0
30°-40°	447.6	14.4
40°-50°	468.3	15.0
50°-60°	439.5	14.1
60°-70°	367.1	11.8
70°-80°	262.5	8.4
80°-90°	156.2	5.0
90°-100°	98.1	3.2
100°-110°	72.1	2.3
110°-120°	48.2	1.5
120°-130°	27.5	0.9
130°-140°	12.3	0.4
140°-150°	2.6	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	713.5	22.9
0°-40°	1161.2	37.3
0°-60°	2069.0	66.4
0°-90°	2854.8	91.6
90°-120°	218.5	7.0
90°-150°	260.8	8.4
90°-180°	261.0	8.4
0°-180°	3115.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	927	927	927	927	927	
5°	928	926	920	928	927	88
15°	884	887	886	896	895	249
25°	798	808	811	824	824	368
35°	687	703	716	731	735	429
45°	562	586	611	630	638	433
55°	428	462	498	525	533	383
65°	296	335	380	410	420	292
75°	161	208	258	292	304	172
85°	50	100	154	188	198	51
90°	13	63	114	148	158	9
95°	11	50	100	131	141	9
105°	8	32	76	104	113	8
115°	5	17	54	78	86	5
125°	3	3	32	54	61	3
135°	2	1	12	30	35	2
145°	1	0	0	8	12	0
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: P242507

CATALOG NUMBER: S123DR-S775D840-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	927.1	927.1	927.1	927.1	927.1
2.5°	932.1	929.1	921.0	929.1	928.1
5°	928.1	926.0	920.0	928.1	927.1
7.5°	921.0	921.0	914.9	925.0	924.0
10°	910.9	912.9	907.9	918.0	915.9
12.5°	898.8	901.8	898.8	907.9	905.8
15°	883.6	886.7	885.7	895.8	894.7
17.5°	865.5	871.5	870.5	879.6	877.6
20°	845.3	851.3	853.3	862.4	863.4
22.5°	824.1	830.1	833.1	845.3	844.2
25°	797.8	807.9	810.9	824.1	824.1
27.5°	772.5	783.7	789.7	800.8	801.8
30°	745.3	758.4	766.5	778.6	778.6
32.5°	715.0	730.1	741.2	754.4	757.4
35°	686.7	702.9	716.0	731.1	735.2
37.5°	656.4	674.6	689.7	706.9	709.9
40°	626.1	644.3	664.5	681.7	685.7
42.5°	592.8	616.0	637.2	656.4	662.5
45°	561.5	585.7	611.0	630.2	638.2
47.5°	528.2	555.4	583.7	604.9	611.0
50°	495.8	524.1	555.4	578.7	585.7
52.5°	461.5	491.8	527.1	551.4	560.5
55°	428.2	461.5	497.9	525.1	533.2
57.5°	395.9	430.2	469.6	496.9	505.9
60°	361.5	397.9	439.3	467.6	478.7
62.5°	329.2	366.6	411.0	439.3	449.4
65°	295.9	335.3	379.7	410.0	420.1
67.5°	262.6	304.0	348.4	381.7	389.8
70°	227.2	270.6	319.1	351.4	361.5
72.5°	194.9	238.3	288.8	322.1	332.2
75°	160.6	208.0	258.5	291.9	304.0
77.5°	131.3	178.7	229.2	264.6	273.7
80°	100.0	149.5	202.0	236.3	246.4
82.5°	72.7	123.2	176.7	211.1	221.2
85°	49.5	100.0	153.5	187.8	197.9
87.5°	30.3	80.8	132.3	166.6	176.7
90°	13.1	62.6	114.1	148.5	158.5
92.5°	12.1	55.5	106.0	139.4	148.5
95°	11.1	50.5	100.0	131.3	141.4
97.5°	10.1	46.5	93.9	124.2	134.3
100°	9.1	41.4	87.9	117.1	127.2
102.5°	8.1	36.4	81.8	110.1	120.2
105°	8.1	32.3	75.7	104.0	113.1
107.5°	7.1	28.3	69.7	96.9	106.0
110°	6.1	24.2	64.6	90.9	99.0



TEST NUMBER: P242507

CATALOG NUMBER: S123DR-S775D840-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	6.1	20.2	58.6	83.8	92.9
115°	5.0	17.2	53.5	77.8	85.8
117.5°	5.0	13.1	47.5	71.7	79.8
120°	4.0	9.1	42.4	65.6	72.7
122.5°	4.0	6.1	37.4	59.6	66.7
125°	3.0	3.0	32.3	53.5	60.6
127.5°	3.0	2.0	27.3	47.5	54.5
130°	3.0	2.0	22.2	41.4	47.5
132.5°	2.0	2.0	17.2	35.3	42.4
135°	2.0	1.0	12.1	30.3	35.3
137.5°	2.0	1.0	8.1	24.2	29.3
140°	1.0	1.0	4.0	19.2	24.2
142.5°	1.0	0.0	0.0	13.1	18.2
145°	1.0	0.0	0.0	8.1	12.1
147.5°	0.0	0.0	0.0	3.0	7.1
150°	0.0	0.0	0.0	0.0	2.0
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)