

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: P243353

Luminaire Tested: **S123DR-H775D927-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243353
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-H775D927-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: 2407.5 lumens
Efficiency: N/A
Efficacy: 102.0 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

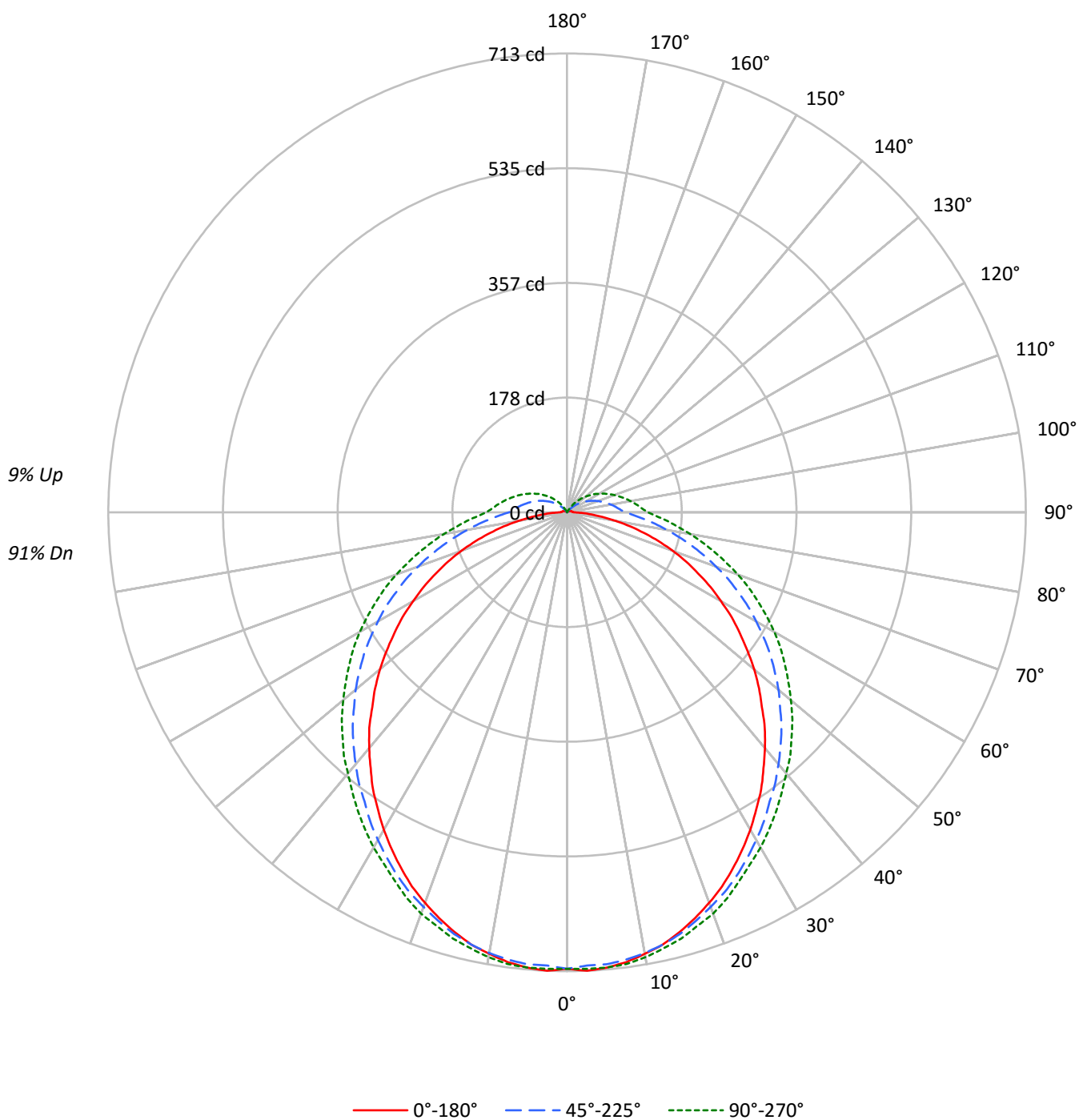
Input Watts (W): 23.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	8598	8598	8598
5°	8624	8377	8374
10°	8543	8166	8119
15°	8426	7933	7841
20°	8264	7656	7558
25°	8080	7399	7232
30°	7873	7112	6956
35°	7666	6820	6683
40°	7437	6583	6421
45°	7187	6348	6201
50°	6976	6108	5974
55°	6719	5864	5752
60°	6448	5592	5533
65°	6166	5303	5268
70°	5843	4993	5008
75°	5354	4655	4703
80°	4741	4321	4434
85°	4209	4051	4229

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.3	2.8
10°-20°	192.0	8.0
20°-30°	287.5	11.9
30°-40°	344.1	14.3
40°-50°	360.8	15.0
50°-60°	339.2	14.1
60°-70°	283.9	11.8
70°-80°	203.7	8.5
80°-90°	122.0	5.1
90°-100°	77.4	3.2
100°-110°	57.0	2.4
110°-120°	38.2	1.6
120°-130°	22.0	0.9
130°-140°	10.1	0.4
140°-150°	2.3	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	546.9	22.7
0°-40°	890.9	37.0
0°-60°	1590.9	66.1
0°-90°	2200.5	91.4
90°-120°	172.5	7.2
90°-150°	207.0	8.6
90°-180°	207.0	8.6
0°-180°	2407.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	709	709	709	709	709	
5°	710	709	705	711	710	67
15°	675	680	678	687	686	190
25°	610	618	624	633	632	281
35°	526	538	549	563	567	328
45°	428	450	471	487	493	331
55°	328	355	385	406	414	293
65°	225	258	293	319	327	223
75°	124	161	200	228	237	131
85°	38	77	120	147	157	39
90°	10	49	90	118	126	7
95°	8	40	78	104	112	7
105°	6	26	60	82	89	6
115°	4	13	42	61	68	4
125°	3	3	26	42	48	3
135°	2	1	11	24	29	1
145°	1	0	0	7	10	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

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	709.3	709.3	709.3	709.3	709.3
2.5°	713.0	710.8	704.9	711.5	710.1
5°	710.1	709.3	704.9	710.8	710.1
7.5°	704.9	704.9	701.2	707.8	707.8
10°	696.7	699.0	695.3	702.7	701.9
12.5°	687.9	690.8	687.9	696.0	693.8
15°	675.3	679.7	678.3	687.1	685.7
17.5°	661.2	666.4	665.7	674.6	673.8
20°	645.7	652.4	652.4	661.2	663.5
22.5°	629.4	636.8	639.1	647.9	649.4
25°	610.2	618.3	623.5	633.1	632.4
27.5°	590.2	599.9	605.8	616.1	616.1
30°	569.5	580.6	588.0	599.1	601.3
32.5°	547.3	560.7	569.5	581.4	584.3
35°	525.9	538.5	548.8	562.9	566.6
37.5°	501.5	517.0	531.1	545.9	548.1
40°	478.5	495.6	511.1	526.6	529.6
42.5°	454.9	472.6	491.1	506.7	513.3
45°	428.3	449.7	471.2	487.4	493.3
47.5°	404.6	426.0	449.0	468.2	474.9
50°	379.4	401.6	429.0	447.5	454.1
52.5°	353.5	378.0	406.8	426.8	433.4
55°	327.7	355.0	385.4	406.1	413.5
57.5°	303.3	330.6	362.4	385.4	393.5
60°	275.9	306.2	339.5	363.2	372.0
62.5°	251.5	282.5	317.3	341.0	349.9
65°	224.9	258.1	292.9	318.8	326.9
67.5°	200.4	233.0	270.7	296.6	305.5
70°	174.6	208.6	246.3	272.9	282.5
72.5°	148.7	184.9	223.4	250.7	258.9
75°	123.5	161.2	200.4	227.8	236.7
77.5°	99.9	137.6	178.3	205.6	215.2
80°	76.2	115.4	157.5	184.9	194.5
82.5°	55.5	95.4	138.3	164.9	173.8
85°	37.7	76.9	119.8	147.2	156.8
87.5°	22.2	62.1	103.6	130.9	139.1
90°	10.4	48.8	90.2	117.6	125.7
92.5°	9.6	43.6	83.6	109.5	117.6
95°	8.1	39.9	78.4	103.6	111.7
97.5°	8.1	36.2	74.0	98.4	105.8
100°	7.4	32.5	69.5	92.5	99.9
102.5°	6.7	28.8	64.3	87.3	94.7
105°	5.9	25.9	59.9	82.1	88.8
107.5°	5.2	22.2	55.5	76.9	83.6
110°	5.2	19.2	51.0	71.7	78.4

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4.4	16.3	46.6	66.6	73.2
115°	3.7	13.3	42.2	61.4	68.0
117.5°	3.7	10.4	37.7	57.0	62.9
120°	3.7	8.1	34.0	51.8	57.7
122.5°	3.0	5.2	30.3	47.3	53.3
125°	3.0	3.0	25.9	42.2	48.1
127.5°	2.2	1.5	22.2	37.7	42.9
130°	2.2	1.5	18.5	33.3	38.5
132.5°	1.5	1.5	14.8	28.8	34.0
135°	1.5	0.7	11.1	24.4	28.8
137.5°	1.5	0.7	7.4	20.0	24.4
140°	0.7	0.7	3.7	15.5	20.0
142.5°	0.7	0.0	0.7	11.8	15.5
145°	0.7	0.0	0.0	7.4	10.4
147.5°	0.7	0.0	0.0	3.7	6.7
150°	0.7	0.0	0.0	0.0	2.2
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)