

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: P242522

Luminaire Tested: **S123DR-S775D940-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242522
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-S775D940-X4F0-XX-UDD-D-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2751.1 lumens
Efficiency: N/A
Efficacy: 104.2 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

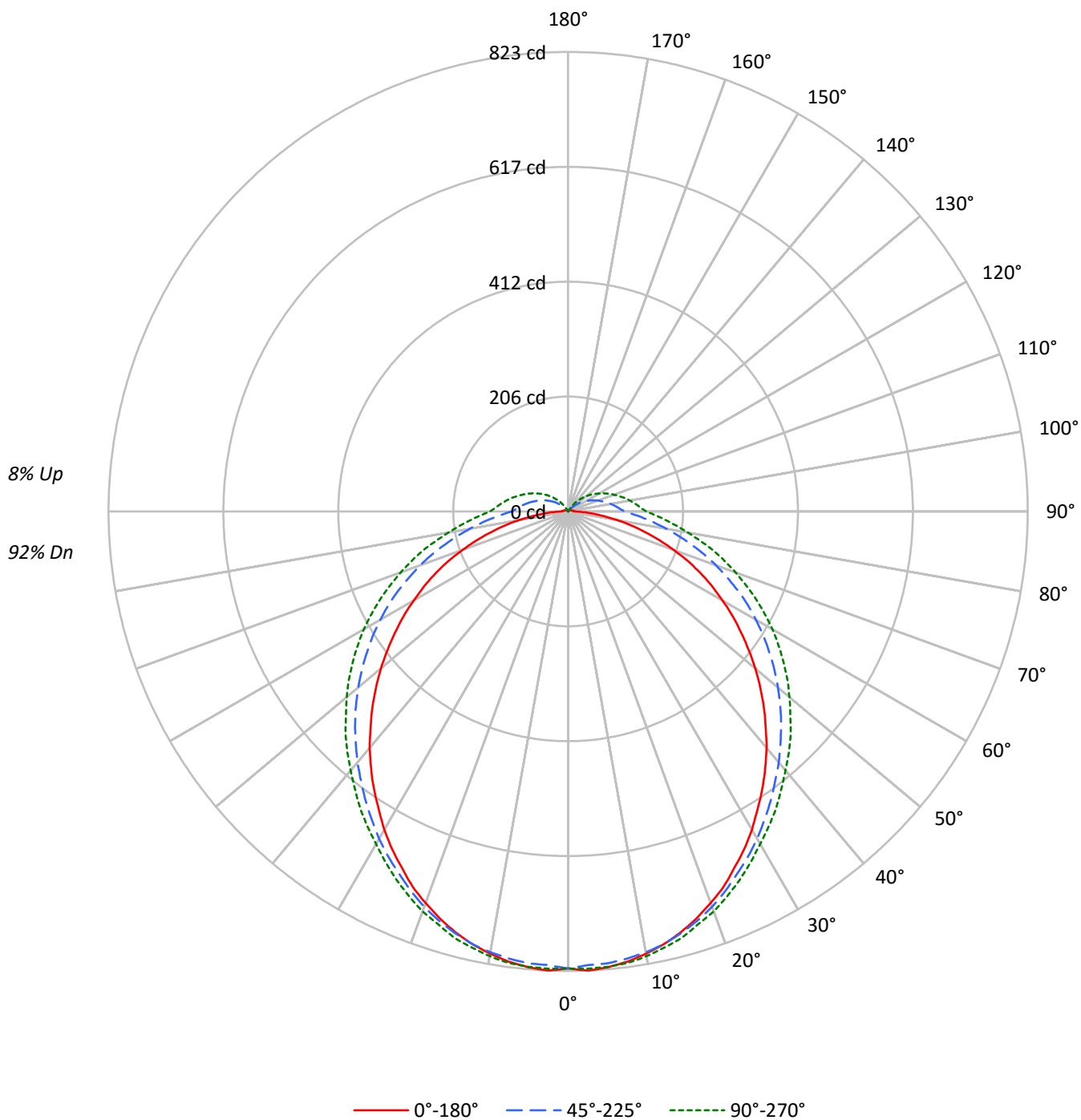
Input Watts (W): 26.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92		
1	105	100	95	90	102	97	92	88	91	87	84	85	82	80	80	78	76	73		
2	95	86	79	72	92	83	77	71	79	73	68	74	69	65	70	66	63	60		
3	86	75	67	60	83	73	65	59	69	62	56	65	59	54	61	56	52	50		
4	79	66	57	50	76	64	56	49	61	54	48	57	51	46	54	49	45	42		
5	72	59	50	43	70	58	49	42	54	47	41	52	45	40	49	43	39	36		
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	44	38	34	32		
7	62	48	39	33	60	47	38	32	45	37	32	42	36	31	40	35	30	28		
8	58	44	35	29	56	43	35	29	41	33	28	39	32	28	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	24	35	28	23	33	27	23	32	26	22	20		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9922	9922	9922
5°	9953	9654	9653
10°	9862	9414	9355
15°	9734	9146	9035
20°	9553	8843	8685
25°	9329	8497	8320
30°	9098	8186	7953
35°	8840	7857	7657
40°	8594	7557	7341
45°	8320	7269	7085
50°	8049	6982	6804
55°	7752	6689	6549
60°	7460	6390	6287
65°	7164	6071	5979
70°	6713	5713	5659
75°	6148	5303	5333
80°	5494	4891	4960
85°	4878	4582	4715

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.7	2.8
10°-20°	221.4	8.0
20°-30°	331.0	12.0
30°-40°	395.2	14.4
40°-50°	413.5	15.0
50°-60°	388.1	14.1
60°-70°	324.1	11.8
70°-80°	231.8	8.4
80°-90°	137.9	5.0
90°-100°	86.7	3.2
100°-110°	63.7	2.3
110°-120°	42.5	1.5
120°-130°	24.3	0.9
130°-140°	10.9	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°	630.1	22.9
0°-40°	1025.3	37.3
0°-60°	1826.9	66.4
0°-90°	2520.7	91.6
90°-120°	192.9	7.0
90°-150°	230.4	8.4
90°-180°	230.0	8.4
0°-180°	2751.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	819	819	819	819	819	
5°	820	818	812	820	819	78
15°	780	783	782	791	790	220
25°	704	713	716	728	728	325
35°	606	621	632	646	649	379
45°	496	517	540	556	564	382
55°	378	408	440	464	471	339
65°	261	296	335	362	371	258
75°	142	184	228	258	268	151
85°	44	88	136	166	175	45
90°	12	55	101	131	140	8
95°	10	45	88	116	125	8
105°	7	28	67	92	100	7
115°	4	15	47	69	76	5
125°	3	3	28	47	54	3
135°	2	1	11	27	31	1
145°	1	0	0	7	11	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°	818.6	818.6	818.6	818.6	818.6
2.5°	823.0	820.4	813.2	820.4	819.5
5°	819.5	817.7	812.3	819.5	818.6
7.5°	813.2	813.2	807.9	816.8	815.9
10°	804.3	806.1	801.6	810.6	808.8
12.5°	793.6	796.3	793.6	801.6	799.9
15°	780.2	782.9	782.0	790.9	790.1
17.5°	764.2	769.5	768.7	776.7	774.9
20°	746.4	751.7	753.5	761.5	762.4
22.5°	727.6	733.0	735.7	746.4	745.5
25°	704.5	713.4	716.0	727.6	727.6
27.5°	682.2	692.0	697.3	707.1	708.0
30°	658.1	669.7	676.8	687.5	687.5
32.5°	631.3	644.7	654.5	666.1	668.8
35°	606.4	620.6	632.2	645.6	649.2
37.5°	579.6	595.7	609.0	624.2	626.9
40°	552.9	568.9	586.7	601.9	605.5
42.5°	523.4	543.9	562.7	579.6	585.0
45°	495.8	517.2	539.5	556.4	563.6
47.5°	466.4	490.4	515.4	534.1	539.5
50°	437.8	462.8	490.4	511.0	517.2
52.5°	407.5	434.3	465.5	486.9	494.9
55°	378.1	407.5	439.6	463.7	470.8
57.5°	349.6	379.9	414.6	438.7	446.7
60°	319.2	351.3	387.9	412.9	422.7
62.5°	290.7	323.7	362.9	387.9	396.8
65°	261.3	296.0	335.3	362.0	371.0
67.5°	231.8	268.4	307.6	337.1	344.2
70°	200.6	239.0	281.8	310.3	319.2
72.5°	172.1	210.4	255.0	284.5	293.4
75°	141.8	183.7	228.3	257.7	268.4
77.5°	115.9	157.8	202.4	233.6	241.7
80°	88.3	132.0	178.3	208.7	217.6
82.5°	64.2	108.8	156.0	186.4	195.3
85°	43.7	88.3	135.5	165.9	174.8
87.5°	26.8	71.3	116.8	147.1	156.0
90°	11.6	55.3	100.8	131.1	140.0
92.5°	10.7	49.0	93.6	123.1	131.1
95°	9.8	44.6	88.3	115.9	124.8
97.5°	8.9	41.0	82.9	109.7	118.6
100°	8.0	36.6	77.6	103.4	112.4
102.5°	7.1	32.1	72.2	97.2	106.1
105°	7.1	28.5	66.9	91.8	99.9
107.5°	6.2	25.0	61.5	85.6	93.6
110°	5.4	21.4	57.1	80.3	87.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	5.4	17.8	51.7	74.0	82.0
115°	4.5	15.2	47.3	68.7	75.8
117.5°	4.5	11.6	41.9	63.3	70.4
120°	3.6	8.0	37.5	58.0	64.2
122.5°	3.6	5.4	33.0	52.6	58.9
125°	2.7	2.7	28.5	47.3	53.5
127.5°	2.7	1.8	24.1	41.9	48.2
130°	2.7	1.8	19.6	36.6	41.9
132.5°	1.8	1.8	15.2	31.2	37.5
135°	1.8	0.9	10.7	26.8	31.2
137.5°	1.8	0.9	7.1	21.4	25.9
140°	0.9	0.9	3.6	16.9	21.4
142.5°	0.9	0.0	0.0	11.6	16.1
145°	0.9	0.0	0.0	7.1	10.7
147.5°	0.0	0.0	0.0	2.7	6.2
150°	0.0	0.0	0.0	0.0	1.8
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)