

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: P243195

Luminaire Tested: **S122DR-H675D840-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P243195  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-53)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122DR-H675D840-X4F0-XX-UDD-D-W  
Description: DEFINE 2 DIRECT RECESSED WITH SATIN DROP DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2597.8 lumens  
Efficiency: N/A  
Efficacy: 110.1 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.15' x L: 3.88' x H: 0.08')  
CIE Type: Semi-Direct

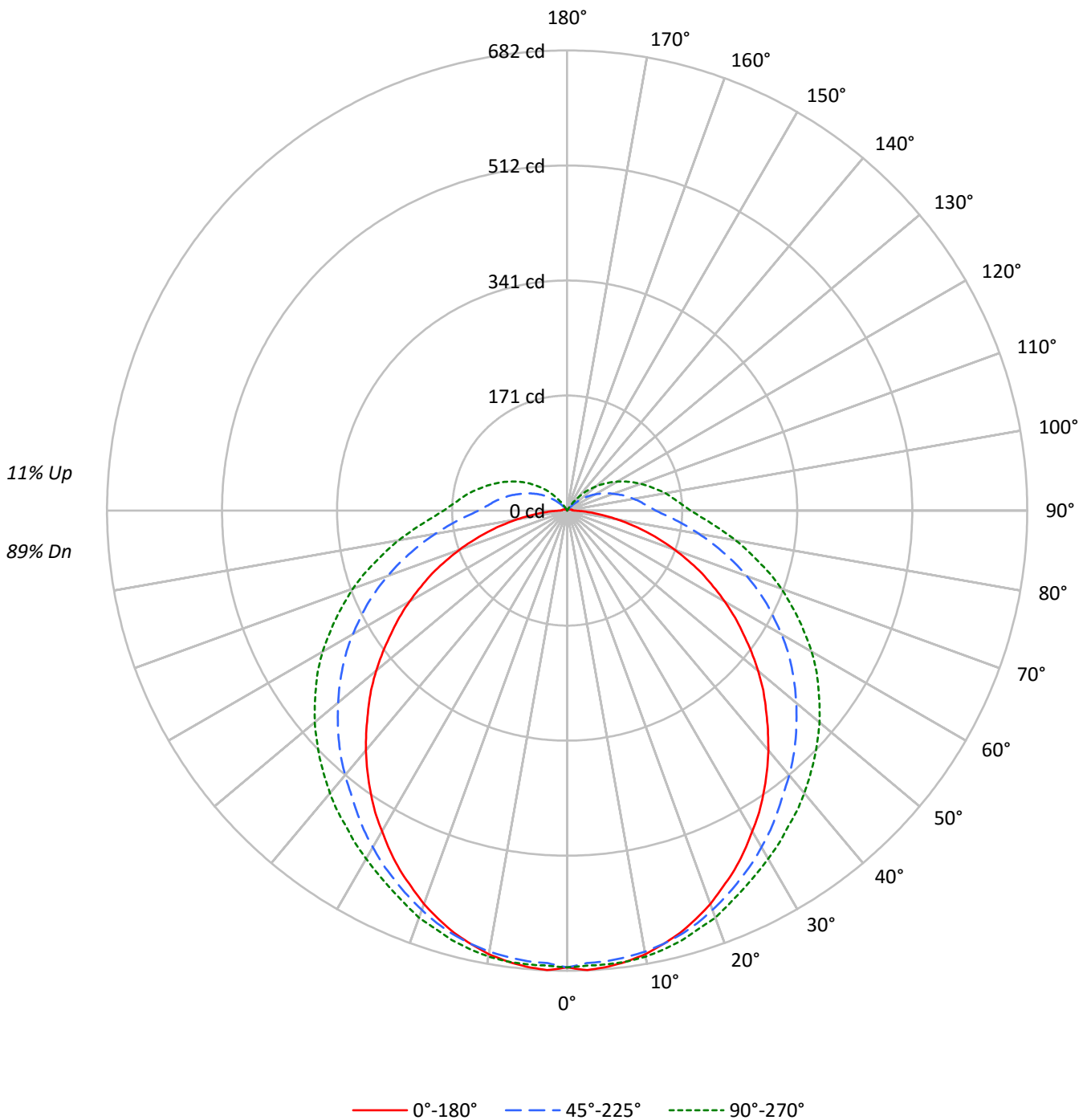
Input Watts (W): 23.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0	
RCR																						
0	116	116	116	116	112	112	112	112	105	105	105	98	98	98	92	92	92	89				
1	104	98	93	88	100	95	90	86	88	84	81	82	79	76	77	74	72	69				
2	93	84	77	70	90	81	74	68	76	70	65	71	66	62	66	62	59	56				
3	85	73	64	57	81	71	63	56	66	59	54	62	56	51	58	53	49	46				
4	77	64	55	48	74	62	54	47	58	51	45	55	48	43	51	46	41	39				
5	71	57	48	41	68	55	47	40	52	44	39	49	42	37	46	40	36	33				
6	65	51	42	35	63	50	41	35	47	39	34	44	37	32	41	36	31	29				
7	60	46	37	31	58	45	37	30	42	35	29	40	33	28	38	32	28	25				
8	56	42	33	27	54	41	33	27	39	31	26	37	30	25	35	29	25	22				
9	52	39	30	25	50	38	30	24	36	28	24	34	27	23	32	26	22	20				
10	49	36	28	22	47	35	27	22	33	26	21	31	25	21	30	24	20	18				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	12895	12895	12895
5°	12957	12365	12294
10°	12864	11955	11796
15°	12701	11534	11271
20°	12478	11078	10775
25°	12223	10625	10264
30°	11923	10202	9855
35°	11642	9779	9490
40°	11330	9418	9192
45°	10991	9091	8890
50°	10679	8758	8610
55°	10268	8442	8311
60°	9905	8095	8015
65°	9504	7742	7658
70°	8924	7322	7316
75°	8284	6873	6912
80°	7372	6430	6560
85°	6456	6082	6210



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	64.2	2.5
10°-20°	184.3	7.1
20°-30°	279.2	10.7
30°-40°	340.5	13.1
40°-50°	366.4	14.1
50°-60°	356.2	13.7
60°-70°	311.4	12.0
70°-80°	239.8	9.2
80°-90°	161.1	6.2
90°-100°	111.5	4.3
100°-110°	82.0	3.2
110°-120°	54.6	2.1
120°-130°	30.9	1.2
130°-140°	13.3	0.5
140°-150°	2.4	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	527.7	20.3
0°-40°	868.1	33.4
0°-60°	1590.8	61.2
0°-90°	2303.1	88.7
90°-120°	248.1	9.5
90°-150°	294.7	11.3
90°-180°	295.0	11.4
0°-180°	2597.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	677	677	677	677	677	
5°	679	676	670	676	675	64
15°	648	651	651	659	659	182
25°	587	597	604	618	618	270
35°	508	525	544	565	571	318
45°	417	442	479	508	519	322
55°	319	356	406	443	454	286
65°	221	268	326	366	378	217
75°	122	177	240	282	294	128
85°	37	97	161	202	214	38
90°	10	68	131	171	183	7
95°	8	55	114	152	163	6
105°	6	34	87	121	131	6
115°	4	16	60	90	101	4
125°	3	2	36	61	71	2
135°	1	1	12	33	42	1
145°	1	0	0	8	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°	677.0	677.0	677.0	677.0	677.0
2.5°	681.7	678.9	671.3	677.0	675.1
5°	678.9	676.1	670.4	676.1	675.1
7.5°	674.2	672.3	667.6	675.1	674.2
10°	667.6	666.6	663.8	671.3	671.3
12.5°	658.1	659.1	658.1	666.6	665.7
15°	647.8	650.6	650.6	659.1	659.1
17.5°	634.6	639.3	641.2	650.6	649.7
20°	620.4	626.1	629.9	640.2	642.1
22.5°	603.5	611.9	617.6	628.9	629.9
25°	587.4	596.9	604.4	617.6	618.5
27.5°	568.6	579.9	591.2	604.4	607.2
30°	548.8	562.9	576.1	592.1	595.9
32.5°	529.9	544.0	561.0	578.0	584.6
35°	508.2	525.2	544.0	564.8	571.4
37.5°	486.5	504.4	527.1	551.6	560.1
40°	463.9	484.6	512.0	538.4	546.9
42.5°	440.3	463.0	496.0	523.3	532.7
45°	416.8	442.2	479.0	508.2	518.6
47.5°	394.1	421.5	461.1	494.1	503.5
50°	369.6	399.8	443.2	477.1	488.4
52.5°	344.2	378.1	425.2	460.1	471.4
55°	318.7	356.4	406.4	443.2	454.5
57.5°	295.1	334.7	387.5	424.3	437.5
60°	269.7	312.1	366.8	405.4	418.6
62.5°	244.2	290.4	346.0	385.6	397.9
65°	220.6	267.8	326.2	365.8	378.1
67.5°	194.2	244.2	304.6	346.0	357.4
70°	169.7	222.5	282.9	324.4	337.6
72.5°	145.2	199.0	261.2	302.7	316.8
75°	121.6	177.3	239.5	281.9	294.2
77.5°	97.1	155.6	218.8	261.2	273.4
80°	75.4	133.9	198.0	240.4	253.6
82.5°	53.7	114.1	179.1	220.6	232.9
85°	36.8	97.1	161.2	201.8	214.0
87.5°	21.7	81.1	144.3	184.8	197.1
90°	10.4	67.9	131.1	170.7	182.9
92.5°	8.5	61.3	121.6	160.3	172.5
95°	7.5	54.7	114.1	151.8	163.1
97.5°	7.5	50.0	107.5	144.3	155.6
100°	6.6	44.3	99.9	135.8	148.0
102.5°	6.6	38.7	93.3	128.2	139.5
105°	5.7	33.9	86.7	120.7	131.1
107.5°	4.7	29.2	79.2	113.1	123.5
110°	4.7	24.5	72.6	105.6	116.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	3.8	20.7	66.9	98.1	108.4
115°	3.8	16.0	60.3	90.5	100.9
117.5°	3.8	11.3	53.7	83.0	93.3
120°	2.8	7.5	48.1	76.4	85.8
122.5°	2.8	4.7	41.5	68.8	78.3
125°	2.8	1.9	35.8	61.3	70.7
127.5°	1.9	1.9	29.2	54.7	63.2
130°	1.9	0.9	23.6	47.1	55.6
132.5°	1.9	0.9	17.9	40.5	48.1
135°	0.9	0.9	12.3	33.0	41.5
137.5°	0.9	0.9	6.6	26.4	33.0
140°	0.9	0.0	2.8	19.8	25.5
142.5°	0.9	0.0	0.0	13.2	18.9
145°	0.9	0.0	0.0	7.5	11.3
147.5°	0.0	0.0	0.0	1.9	5.7
150°	0.0	0.0	0.0	0.0	0.9
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)