

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: P242321

Luminaire Tested: **S122DR-S675D927-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242321  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-14)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122DR-S675D927-X4F0-XX-UDD-D-W  
Description: DEFINE 2 DIRECT RECESSED WITH SATIN DROP DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 2700K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2085.7 lumens  
Efficiency: N/A  
Efficacy: 79.0 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

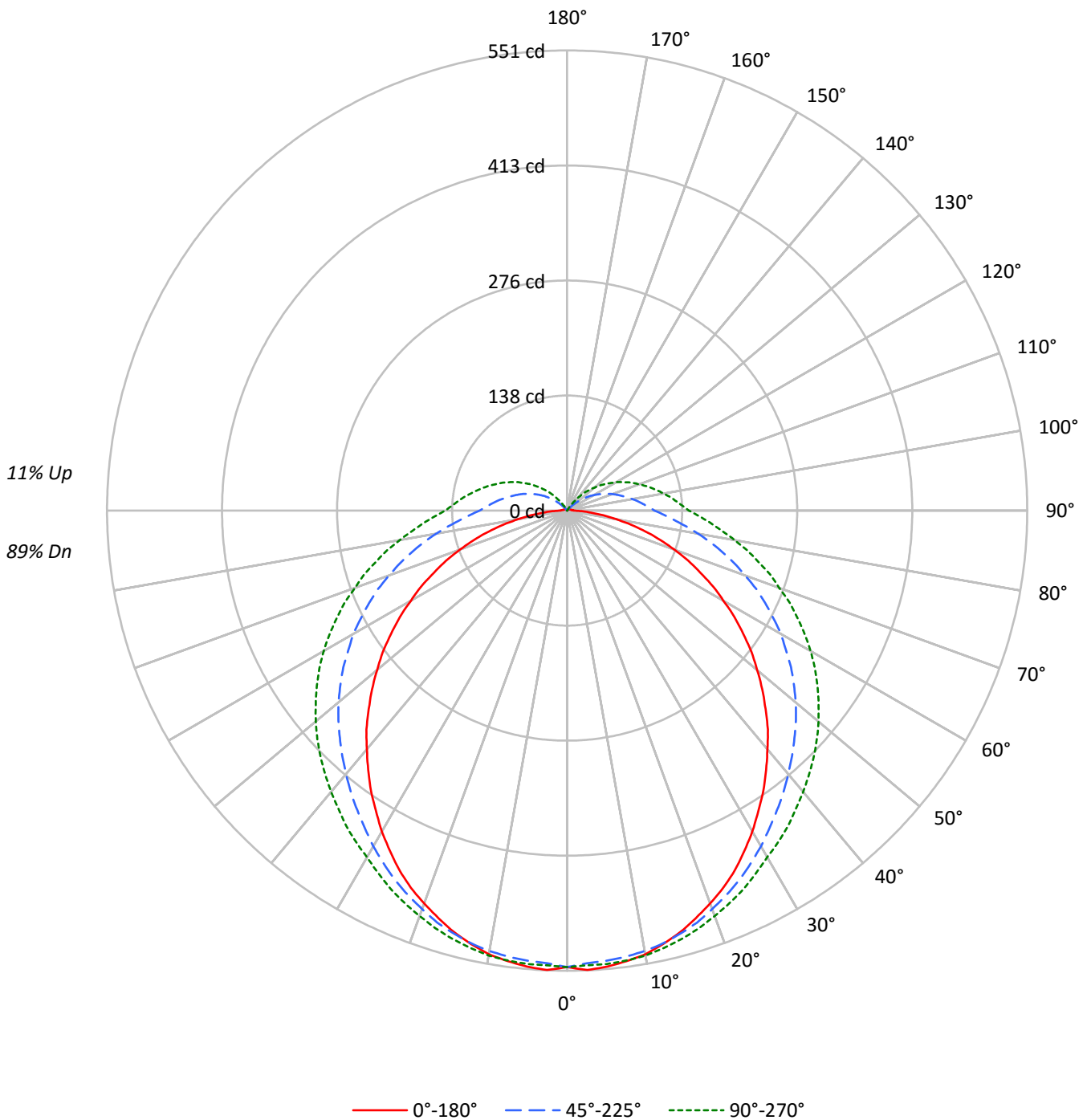
Input Watts (W): 26.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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	85	81	82	79	77	77	75	72	69
2	94	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	42	39
5	71	57	48	41	68	56	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	42	36	31	29
7	60	46	37	31	58	45	37	31	43	35	30	40	34	29	38	32	28	25
8	56	42	34	28	54	41	33	27	39	32	26	37	30	25	35	29	25	23
9	52	39	30	25	50	38	30	24	36	29	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°	10411	10411	10411
5°	10462	9980	9925
10°	10395	9644	9508
15°	10250	9297	9077
20°	10070	8930	8667
25°	9890	8579	8296
30°	9637	8220	7927
35°	9383	7875	7658
40°	9113	7577	7390
45°	8858	7307	7157
50°	8584	7060	6926
55°	8296	6796	6693
60°	7944	6522	6447
65°	7578	6204	6161
70°	7167	5865	5853
75°	6636	5524	5566
80°	5807	5170	5266
85°	5000	4841	5012



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	51.8	2.5
10°-20°	148.6	7.1
20°-30°	225.2	10.8
30°-40°	274.2	13.1
40°-50°	295.0	14.1
50°-60°	286.5	13.7
60°-70°	250.2	12.0
70°-80°	192.6	9.2
80°-90°	129.0	6.2
90°-100°	89.0	4.3
100°-110°	65.0	3.1
110°-120°	42.9	2.1
120°-130°	23.9	1.1
130°-140°	10.0	0.5
140°-150°	1.7	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	425.6	20.4
0°-40°	699.8	33.6
0°-60°	1281.4	61.4
0°-90°	1853.2	88.9
90°-120°	196.9	9.4
90°-150°	232.5	11.1
90°-180°	233.0	11.2
0°-180°	2085.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	547	547	547	547	547	
5°	548	546	541	546	545	52
15°	523	524	524	532	531	147
25°	475	481	488	498	500	219
35°	410	423	438	456	461	256
45°	336	357	385	410	418	259
55°	258	286	327	356	366	230
65°	176	215	261	294	304	175
75°	97	142	192	227	237	103
85°	28	78	128	162	173	30
90°	8	54	105	136	146	6
95°	6	44	91	121	131	5
105°	4	27	68	96	105	5
115°	3	12	48	71	80	3
125°	2	2	27	48	56	2
135°	1	1	9	25	32	1
145°	0	0	0	5	9	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°	546.6	546.6	546.6	546.6	546.6
2.5°	550.6	548.2	542.6	546.6	545.0
5°	548.2	545.8	541.1	545.8	545.0
7.5°	544.2	542.6	538.7	544.2	543.4
10°	539.5	537.9	535.5	541.9	541.1
12.5°	531.6	532.3	530.8	537.1	536.3
15°	522.8	524.4	524.4	531.6	530.8
17.5°	511.8	514.9	517.3	524.4	524.4
20°	500.7	504.6	507.8	516.5	516.5
22.5°	488.8	493.5	498.3	507.0	508.6
25°	475.3	480.9	488.0	497.5	499.9
27.5°	459.5	468.2	476.1	488.0	489.6
30°	443.6	453.9	464.2	476.9	479.3
32.5°	426.2	438.1	450.8	465.8	470.6
35°	409.6	423.0	438.1	455.5	461.1
37.5°	391.3	406.4	425.4	444.4	450.0
40°	373.1	390.5	411.9	432.5	439.7
42.5°	355.7	373.1	398.5	421.4	428.6
45°	335.9	357.3	385.0	409.6	417.5
47.5°	316.9	339.8	371.5	396.9	405.6
50°	297.1	321.6	357.3	384.2	392.9
52.5°	278.1	304.2	342.2	369.9	379.5
55°	257.5	286.0	327.2	355.7	366.0
57.5°	237.7	269.3	310.5	341.4	351.7
60°	216.3	250.3	295.5	325.6	336.7
62.5°	197.3	232.9	278.1	310.5	320.8
65°	175.9	214.7	261.4	293.9	304.2
67.5°	156.9	197.3	244.8	277.3	288.4
70°	136.3	177.4	226.6	260.6	270.1
72.5°	117.2	160.0	209.9	243.2	255.1
75°	97.4	141.8	192.5	226.6	236.9
77.5°	78.4	124.4	175.9	209.9	221.0
80°	59.4	107.7	159.2	192.5	203.6
82.5°	43.6	91.1	143.4	176.7	187.0
85°	28.5	77.6	128.3	161.6	172.7
87.5°	17.4	65.0	115.7	148.1	158.4
90°	7.9	53.9	104.6	136.3	145.8
92.5°	7.1	49.1	97.4	128.3	137.8
95°	6.3	43.6	91.1	121.2	130.7
97.5°	5.5	39.6	85.6	114.9	124.4
100°	5.5	34.9	79.2	108.5	117.2
102.5°	4.8	30.9	73.7	102.2	110.9
105°	4.0	26.9	68.1	95.9	104.6
107.5°	4.0	23.0	62.6	89.5	98.2
110°	3.2	19.0	57.8	83.2	91.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	3.2	15.8	52.3	77.6	86.3
115°	3.2	11.9	47.5	71.3	80.0
117.5°	2.4	8.7	42.0	65.8	73.7
120°	2.4	5.5	37.2	59.4	68.1
122.5°	2.4	3.2	32.5	53.9	61.0
125°	1.6	1.6	26.9	48.3	55.5
127.5°	1.6	0.8	22.2	42.0	49.1
130°	1.6	0.8	17.4	36.4	42.8
132.5°	1.6	0.8	12.7	30.9	37.2
135°	0.8	0.8	8.7	25.3	31.7
137.5°	0.8	0.8	4.8	19.8	25.3
140°	0.8	0.0	1.6	14.3	19.0
142.5°	0.8	0.0	0.0	9.5	13.5
145°	0.0	0.0	0.0	4.8	8.7
147.5°	0.0	0.0	0.0	0.8	3.2
150°	0.0	0.0	0.0	0.0	0.0
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)