

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P242321

Luminaire Tested: S122DRP-S675D927-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
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
Product Line: NEO-RAY
Catalog Number: S122DRP-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: -

Summary

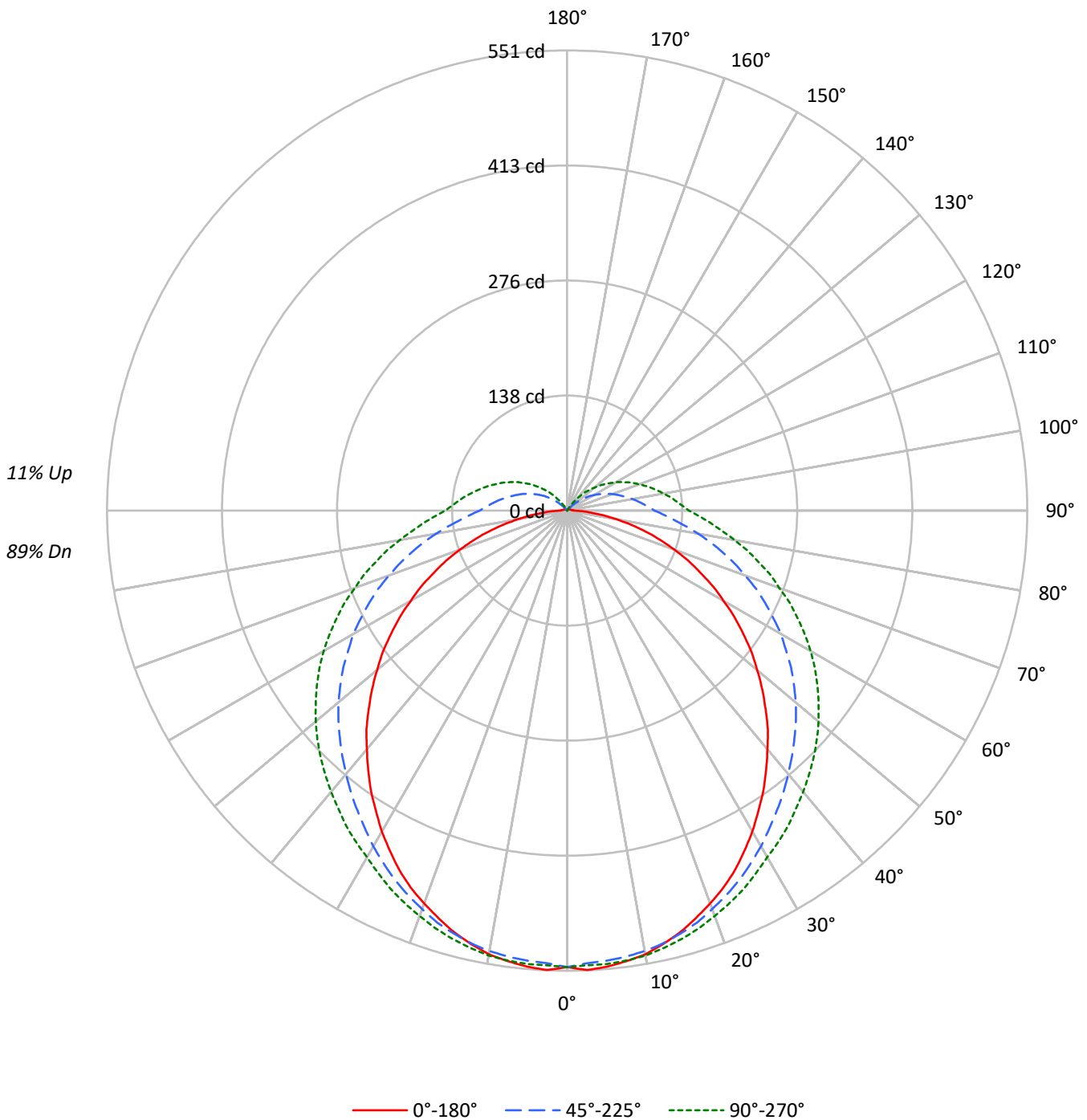
Lumens per Lamp: N/A
Luminaire Lumens: 2085.7 lumens
Efficiency: N/A
Efficacy: 79.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.15' x L: 3.88' x H: 0.08')
CIE Type: Semi-Direct

Input Watts (W): 26.4
Input Voltage (V): 120
Input Current (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: 24 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

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8858 cd/sqm



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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



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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	16.36	17.84	16.89	18.37	18.95	19.42	20.90	19.95	21.43	22.01
	3H	17.86	19.21	18.40	19.75	20.37	22.05	23.40	22.59	23.94	24.56
	4H	18.36	19.65	18.92	20.20	20.83	23.33	24.62	23.89	25.17	25.80
	6H	18.67	19.87	19.25	20.44	21.08	24.66	25.86	25.23	26.42	27.07
	8H	18.75	19.90	19.33	20.49	21.14	25.34	26.49	25.93	27.08	27.73
	12H	18.79	19.89	19.38	20.47	21.15	26.10	27.20	26.69	27.78	28.46
4H	2H	17.47	18.76	18.03	19.31	19.94	19.81	21.10	20.37	21.65	22.28
	3H	19.23	20.33	19.80	20.92	21.57	22.65	23.75	23.22	24.35	25.00
	4H	19.87	20.88	20.46	21.48	22.17	24.09	25.11	24.69	25.71	26.39
	6H	20.32	21.22	20.93	21.84	22.54	25.60	26.50	26.21	27.12	27.82
	8H	20.45	21.29	21.06	21.92	22.62	26.38	27.22	27.00	27.85	28.56
	12H	20.52	21.29	21.16	21.94	22.65	27.25	28.02	27.89	28.67	29.38
8H	4H	20.71	21.56	21.33	22.18	22.89	24.29	25.13	24.90	25.76	26.46
	6H	21.37	22.09	22.02	22.76	23.47	25.95	26.67	26.60	27.33	28.04
	8H	21.61	22.25	22.26	22.93	23.65	26.86	27.50	27.51	28.18	28.90
	12H	21.77	22.35	22.43	23.01	23.80	27.89	28.47	28.55	29.13	29.92
12H	4H	20.94	21.71	21.58	22.36	23.08	24.29	25.06	24.93	25.71	26.43
	6H	21.72	22.37	22.38	23.04	23.76	25.98	26.63	26.64	27.31	28.03
	8H	22.05	22.63	22.72	23.30	24.08	26.95	27.53	27.61	28.19	28.98