

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: P242345

Luminaire Tested: S122DRP-S675D935-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242345
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-S675D935-X4F0-XX-UDD-D-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

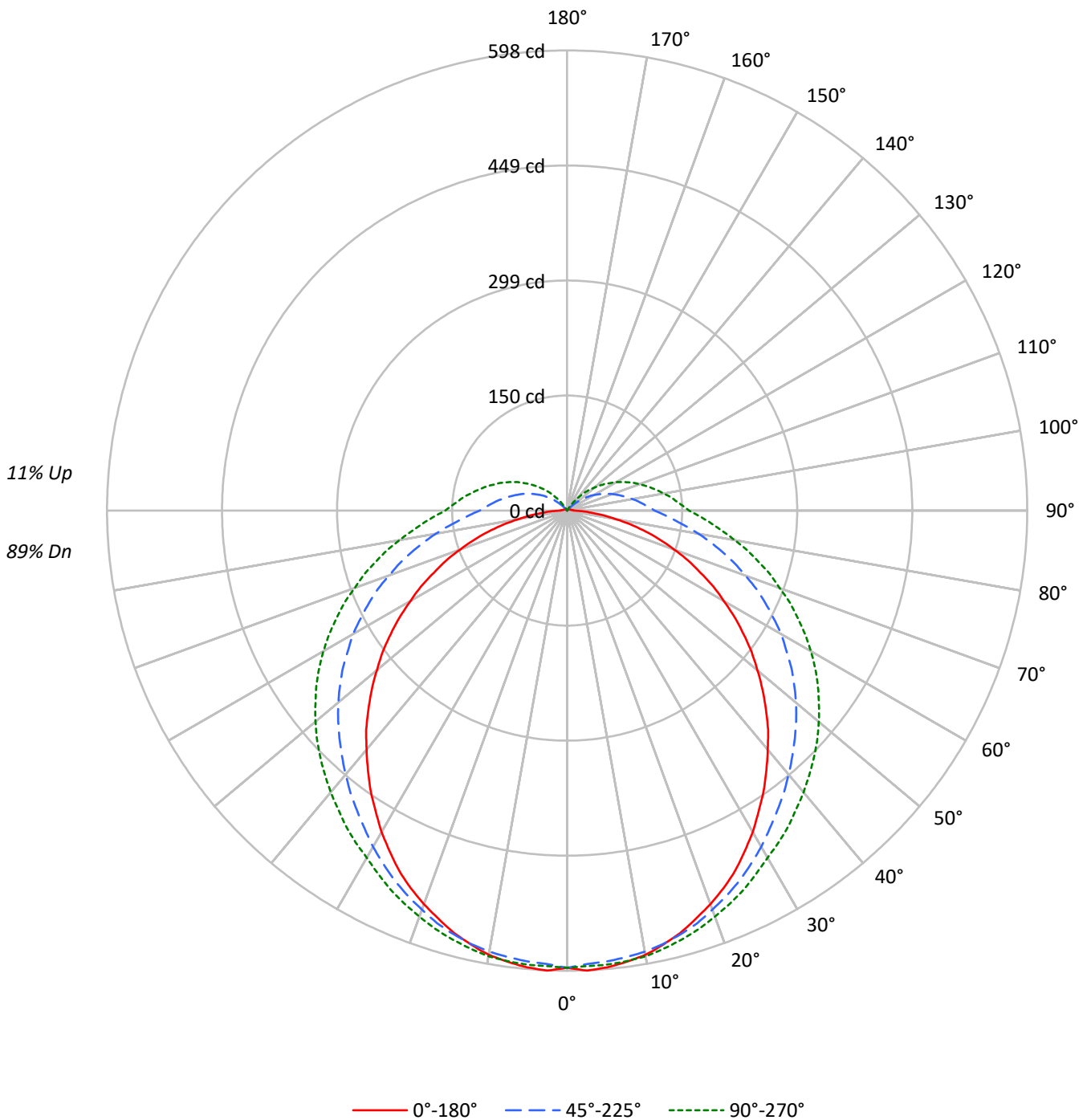
Lumens per Lamp: N/A
Luminaire Lumens: 2266.9 lumens
Efficiency: N/A
Efficacy: 85.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.15' x L: 3.88' x H: 0.08')
CIE Type: Semi-Direct

Input Watts (W): 26.4
Input Voltage (V): 120
Input Current (A_{in}): 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	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°	11316	11316	11316
5°	11371	10847	10788
10°	11297	10482	10334
15°	11142	10105	9866
20°	10945	9706	9420
25°	10749	9324	9016
30°	10476	8934	8615
35°	10196	8558	8322
40°	9904	8235	8032
45°	9628	7941	7777
50°	9329	7673	7529
55°	9015	7386	7274
60°	8635	7089	7006
65°	8233	6742	6696
70°	7788	6372	6362
75°	7215	6003	6047
80°	6316	5621	5724
85°	5438	5264	5447

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9628 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.3	2.5
10°-20°	161.5	7.1
20°-30°	244.7	10.8
30°-40°	298.0	13.1
40°-50°	320.7	14.1
50°-60°	311.4	13.7
60°-70°	271.9	12.0
70°-80°	209.3	9.2
80°-90°	140.2	6.2
90°-100°	96.7	4.3
100°-110°	70.6	3.1
110°-120°	46.6	2.1
120°-130°	26.0	1.1
130°-140°	10.9	0.5
140°-150°	1.8	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	462.6	20.4
0°-40°	760.6	33.6
0°-60°	1392.7	61.4
0°-90°	2014.1	88.9
90°-120°	214.0	9.4
90°-150°	252.7	11.1
90°-180°	253.0	11.2
0°-180°	2266.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	594	594	594	594	594	
5°	596	593	588	593	592	57
15°	568	570	570	578	577	160
25°	517	523	530	541	543	238
35°	445	460	476	495	501	278
45°	365	388	418	445	454	282
55°	280	311	356	387	398	250
65°	191	233	284	319	331	190
75°	106	154	209	246	257	112
85°	31	84	140	176	188	33
90°	9	58	114	148	158	6
95°	7	47	99	132	142	5
105°	4	29	74	104	114	5
115°	3	13	52	78	87	3
125°	2	2	29	52	60	2
135°	1	1	10	28	34	1
145°	0	0	0	5	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°	594.1	594.1	594.1	594.1	594.1
2.5°	598.4	595.8	589.8	594.1	592.4
5°	595.8	593.2	588.1	593.2	592.4
7.5°	591.5	589.8	585.5	591.5	590.6
10°	586.3	584.6	582.0	588.9	588.1
12.5°	577.7	578.6	576.9	583.8	582.9
15°	568.3	570.0	570.0	577.7	576.9
17.5°	556.2	559.7	562.2	570.0	570.0
20°	544.2	548.5	551.9	561.4	561.4
22.5°	531.2	536.4	541.6	551.0	552.8
25°	516.6	522.6	530.4	540.7	543.3
27.5°	499.4	508.9	517.5	530.4	532.1
30°	482.2	493.4	504.5	518.3	520.9
32.5°	463.2	476.1	489.9	506.3	511.4
35°	445.1	459.8	476.1	495.1	501.1
37.5°	425.3	441.7	462.4	483.0	489.0
40°	405.5	424.5	447.7	470.1	477.9
42.5°	386.6	405.5	433.1	458.1	465.8
45°	365.1	388.3	418.4	445.1	453.7
47.5°	344.4	369.4	403.8	431.4	440.8
50°	322.9	349.6	388.3	417.6	427.1
52.5°	302.2	330.6	372.0	402.1	412.4
55°	279.8	310.8	355.6	386.6	397.8
57.5°	258.3	292.7	337.5	371.1	382.3
60°	235.1	272.1	321.2	353.9	365.9
62.5°	214.4	253.1	302.2	337.5	348.7
65°	191.1	233.3	284.1	319.4	330.6
67.5°	170.5	214.4	266.0	301.4	313.4
70°	148.1	192.9	246.2	283.3	293.6
72.5°	127.4	173.9	228.2	264.3	277.2
75°	105.9	154.1	209.2	246.2	257.4
77.5°	85.2	135.2	191.1	228.2	240.2
80°	64.6	117.1	173.1	209.2	221.3
82.5°	47.4	99.0	155.8	192.0	203.2
85°	31.0	84.4	139.5	175.6	187.7
87.5°	18.9	70.6	125.7	161.0	172.2
90°	8.6	58.5	113.7	148.1	158.4
92.5°	7.7	53.4	105.9	139.5	149.8
95°	6.9	47.4	99.0	131.7	142.1
97.5°	6.0	43.1	93.0	124.8	135.2
100°	6.0	37.9	86.1	118.0	127.4
102.5°	5.2	33.6	80.1	111.1	120.5
105°	4.3	29.3	74.0	104.2	113.7
107.5°	4.3	25.0	68.0	97.3	106.8
110°	3.4	20.7	62.9	90.4	99.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.4	17.2	56.8	84.4	93.8
115°	3.4	12.9	51.7	77.5	87.0
117.5°	2.6	9.5	45.6	71.5	80.1
120°	2.6	6.0	40.5	64.6	74.0
122.5°	2.6	3.4	35.3	58.5	66.3
125°	1.7	1.7	29.3	52.5	60.3
127.5°	1.7	0.9	24.1	45.6	53.4
130°	1.7	0.9	18.9	39.6	46.5
132.5°	1.7	0.9	13.8	33.6	40.5
135°	0.9	0.9	9.5	27.6	34.4
137.5°	0.9	0.9	5.2	21.5	27.6
140°	0.9	0.0	1.7	15.5	20.7
142.5°	0.9	0.0	0.0	10.3	14.6
145°	0.0	0.0	0.0	5.2	9.5
147.5°	0.0	0.0	0.0	0.9	3.4
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	16.65	18.13	17.17	18.66	19.24	19.71	21.19	20.24	21.72	22.30
	3H	18.15	19.50	18.69	20.04	20.66	22.34	23.69	22.88	24.23	24.85
	4H	18.65	19.94	19.21	20.49	21.12	23.62	24.90	24.18	25.46	26.09
	6H	18.96	20.16	19.54	20.73	21.37	24.95	26.15	25.52	26.71	27.36
	8H	19.04	20.19	19.62	20.78	21.43	25.63	26.78	26.21	27.37	28.02
	12H	19.08	20.18	19.67	20.76	21.44	26.39	27.49	26.98	28.07	28.75
4H	2H	17.76	19.04	18.32	19.60	20.23	20.10	21.39	20.66	21.94	22.57
	3H	19.52	20.62	20.09	21.21	21.86	22.94	24.04	23.51	24.64	25.29
	4H	20.16	21.17	20.75	21.77	22.46	24.38	25.40	24.97	26.00	26.68
	6H	20.61	21.51	21.22	22.13	22.83	25.89	26.79	26.50	27.41	28.11
	8H	20.74	21.58	21.35	22.21	22.91	26.67	27.51	27.28	28.14	28.84
	12H	20.81	21.58	21.45	22.23	22.94	27.54	28.31	28.17	28.96	29.67
8H	4H	21.00	21.85	21.62	22.47	23.18	24.58	25.42	25.19	26.05	26.75
	6H	21.66	22.38	22.31	23.05	23.76	26.24	26.96	26.89	27.62	28.33
	8H	21.90	22.54	22.55	23.22	23.94	27.14	27.79	27.80	28.47	29.19
	12H	22.06	22.64	22.72	23.30	24.09	28.18	28.76	28.84	29.42	30.21
12H	4H	21.23	22.00	21.87	22.65	23.36	24.58	25.35	25.22	26.00	26.72
	6H	22.01	22.66	22.67	23.33	24.05	26.27	26.92	26.93	27.60	28.32
	8H	22.34	22.92	23.00	23.59	24.37	27.24	27.82	27.90	28.48	29.27