

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



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P926291

Luminaire Tested: DFN2DIP-TR3F0-070D030US950-RLLONL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P926291
REPORT IS A COMBINATION OF REPORTS P901800 AND P898751
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-TR3F0-070D030US950-RLLONL
Description: 3 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Open No Lens
Light Source: -
Ballast/Driver: -

Summary

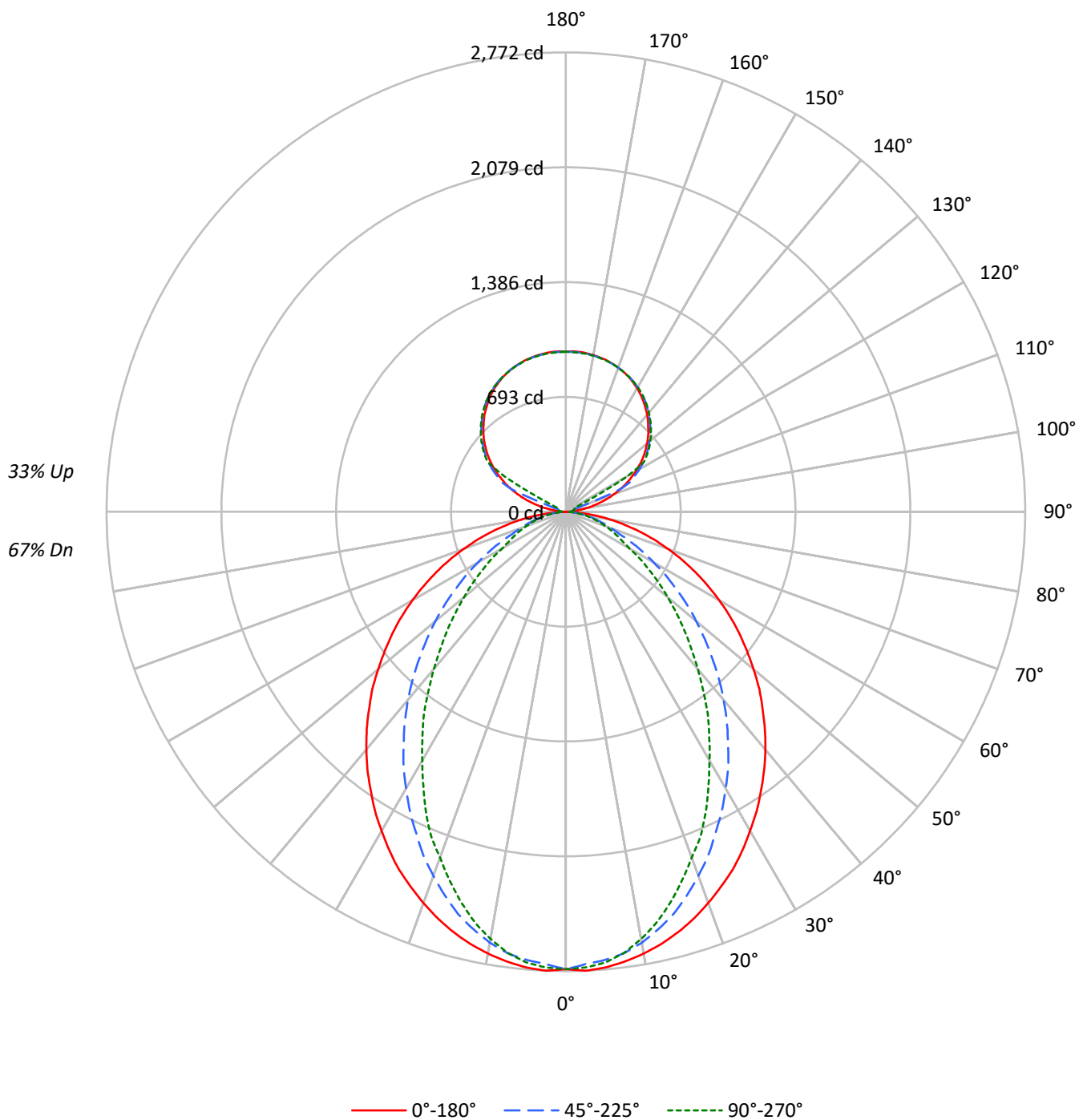
Lumens per Lamp: N/A
Luminaire Lumens: 8509.6 lumens
Efficiency: N/A
Efficacy: 91.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 2.74' x L: 3.16' x H: 0.1')
CIE Type: Semi-Direct

Input Watts (W): 92.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9971
Total Harmonic Distortion (THDi): 0.049
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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	111	111	111	111	105	105	105	105	93	93	93	82	82	82	71	71	71
1	102	98	94	91	96	93	89	86	82	80	78	73	71	69	64	63	62
2	94	86	80	75	88	82	76	72	73	69	65	65	62	59	57	55	53
3	86	77	69	64	81	72	66	61	65	60	56	58	54	51	51	48	46
4	79	68	60	54	74	65	58	52	58	53	48	52	48	44	46	43	40
5	73	61	53	47	68	58	51	45	52	47	42	47	42	39	42	38	35
6	67	55	47	41	63	53	45	40	48	42	37	43	38	34	38	35	31
7	62	50	42	37	59	48	41	36	43	37	33	39	34	31	35	31	28
8	58	46	38	33	55	44	37	32	40	34	30	36	31	28	33	29	26
9	54	42	35	30	51	40	33	29	37	31	27	33	29	25	30	26	23
10	51	39	32	27	48	37	31	26	34	28	24	31	26	23	28	24	21

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3439	3439	3439
5°	3443	3382	3404
10°	3407	3313	3291
15°	3358	3200	3118
20°	3294	3047	2906
25°	3229	2875	2701
30°	3141	2699	2443
35°	3056	2511	2215
40°	2968	2316	1955
45°	2867	2100	1720
50°	2762	1882	1490
55°	2653	1650	1269
60°	2526	1407	1042
65°	2379	1161	935
70°	2202	932	843
75°	1979	815	762
80°	1656	675	654
85°	1126	437	478

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2867 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	258.7	3.0
10°-20°	710.1	8.3
20°-30°	997.0	11.7
30°-40°	1086.8	12.8
40°-50°	998.8	11.7
50°-60°	784.4	9.2
60°-70°	510.6	6.0
70°-80°	262.8	3.1
80°-90°	68.8	0.8
90°-100°	31.9	0.4
100°-110°	118.7	1.4
110°-120°	314.9	3.7
120°-130°	522.3	6.1
130°-140°	554.8	6.5
140°-150°	515.6	6.1
150°-160°	414.5	4.9
160°-170°	267.1	3.1
170°-180°	91.9	1.1
0°-30°	1965.7	23.1
0°-40°	3052.5	35.9
0°-60°	4835.8	56.8
0°-90°	5678.0	66.7
90°-120°	465.5	5.5
90°-150°	2058.1	24.2
90°-180°	2832.0	33.3
0°-180°	8509.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2760	2760	2760	2760	2760	
5°	2760	2748	2715	2738	2730	262
15°	2625	2598	2513	2465	2440	740
25°	2383	2303	2138	2036	1998	1096
35°	2053	1926	1706	1549	1494	1285
45°	1679	1511	1249	1071	1012	1296
55°	1276	1082	812	662	615	1140
65°	862	659	435	350	342	854
75°	460	285	200	182	180	486
85°	107	55	47	47	47	123
90°	1	8	14	18	19	8
95°	45	22	27	31	30	54
105°	212	233	43	50	53	227
115°	402	414	431	108	57	396
125°	568	577	591	596	598	507
135°	703	714	721	728	726	543
145°	816	815	827	832	828	510
155°	898	892	900	904	899	414
165°	946	942	944	949	944	267
175°	968	963	964	969	962	92
180°	966	966	966	966	966	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2760.0	2760.0	2760.0	2760.0	2760.0
2.5°	2772.4	2760.0	2732.4	2757.6	2752.6
5°	2760.0	2747.5	2715.0	2737.5	2730.1
7.5°	2737.5	2722.6	2687.7	2697.4	2685.0
10°	2707.5	2690.1	2640.2	2632.6	2617.7
12.5°	2670.2	2647.6	2580.1	2565.2	2537.6
15°	2625.1	2597.6	2512.7	2465.3	2440.4
17.5°	2572.7	2532.7	2427.7	2372.8	2332.8
20°	2512.7	2462.7	2337.9	2275.6	2220.4
22.5°	2447.9	2390.3	2245.3	2160.5	2123.2
25°	2382.9	2302.9	2138.0	2035.7	1998.2
27.5°	2305.5	2220.4	2038.1	1920.8	1863.3
30°	2223.1	2128.0	1928.1	1801.0	1733.4
32.5°	2143.1	2028.1	1823.5	1673.5	1610.9
35°	2053.2	1925.7	1706.1	1548.7	1493.6
37.5°	1965.8	1828.2	1596.1	1423.6	1361.4
40°	1873.3	1723.6	1481.1	1303.8	1238.9
42.5°	1778.4	1618.7	1366.3	1181.3	1119.1
45°	1678.6	1511.0	1249.0	1071.4	1011.5
47.5°	1583.6	1406.4	1136.6	959.1	904.2
50°	1478.7	1301.4	1026.6	854.1	801.9
52.5°	1376.1	1188.8	921.7	756.8	709.4
55°	1276.3	1081.5	811.7	662.0	614.6
57.5°	1174.0	974.1	714.5	574.5	534.5
60°	1069.1	869.2	611.9	484.7	444.7
62.5°	966.7	766.9	524.4	404.7	384.7
65°	861.7	659.3	434.6	349.8	342.1
67.5°	761.9	559.4	349.8	307.1	299.7
70°	656.9	462.1	289.6	264.7	254.6
72.5°	557.0	372.1	242.2	222.4	217.3
75°	459.5	284.6	199.8	182.3	179.9
77.5°	362.2	202.2	157.4	147.3	142.3
80°	272.2	144.9	119.8	110.0	110.0
82.5°	189.8	97.5	82.4	77.4	77.4
85°	107.3	54.9	47.4	47.4	47.4
87.5°	40.0	19.8	19.8	17.5	17.5
90°	0.7	8.4	13.9	17.6	18.8
92.5°	17.6	14.7	16.8	18.2	18.8
95°	45.4	22.3	27.2	30.8	30.1
97.5°	81.8	24.5	35.6	37.8	38.4
100°	123.7	28.0	39.9	45.4	46.8
102.5°	169.8	168.5	41.2	48.8	51.0
105°	212.5	233.4	42.6	50.3	53.1
107.5°	262.1	279.5	44.1	51.7	54.6
110°	309.7	324.3	122.3	52.5	55.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	354.4	366.9	355.1	53.8	55.9
115°	401.8	413.7	431.2	107.6	57.3
117.5°	443.1	457.1	469.0	369.0	185.9
120°	489.2	499.7	512.3	520.7	426.3
122.5°	528.3	539.6	553.6	557.7	558.5
125°	568.2	577.3	590.6	595.5	597.6
127.5°	604.5	614.3	624.9	631.8	632.5
130°	638.8	650.1	657.7	665.3	664.7
132.5°	673.7	682.9	690.5	696.8	696.1
135°	703.1	714.4	720.6	727.6	726.2
137.5°	733.8	742.2	749.3	756.2	754.1
140°	763.9	769.5	777.1	783.4	780.0
142.5°	789.1	794.0	803.1	808.6	805.2
145°	815.7	814.9	826.8	831.7	828.2
147.5°	838.7	836.6	848.5	851.9	849.2
150°	861.1	856.2	867.4	871.5	868.0
152.5°	879.9	874.3	884.8	889.0	884.2
155°	898.1	891.9	900.2	904.4	898.9
157.5°	912.8	907.3	913.6	918.4	912.8
160°	925.4	921.2	925.4	929.6	924.6
162.5°	936.5	932.3	935.9	940.7	934.4
165°	946.3	942.2	944.3	949.1	944.3
167.5°	954.0	949.8	951.9	956.9	950.6
170°	960.3	956.1	957.5	962.4	956.1
172.5°	964.5	960.3	961.7	966.6	960.3
175°	967.9	963.1	964.5	969.4	962.4
177.5°	969.4	964.5	965.3	970.1	963.8
180°	965.9	965.9	965.9	965.9	965.9

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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	12.82	13.81	13.63	14.63	15.65	8.80	9.79	9.60	10.61	11.62
	3H	14.50	15.39	15.32	16.22	17.26	9.99	10.88	10.81	11.71	12.75
	4H	15.11	15.94	15.95	16.79	17.84	10.45	11.28	11.28	12.12	13.18
	6H	15.53	16.30	16.38	17.15	18.22	10.77	11.54	11.62	12.39	13.45
	8H	15.66	16.39	16.52	17.26	18.32	10.86	11.59	11.72	12.46	13.53
	12H	15.72	16.42	16.59	17.28	18.37	10.91	11.61	11.77	12.47	13.56
4H	2H	12.86	13.69	13.70	14.53	15.59	9.41	10.24	10.25	11.08	12.14
	3H	14.69	15.38	15.54	16.26	17.33	10.77	11.46	11.62	12.33	13.40
	4H	15.38	16.01	16.25	16.88	17.98	11.31	11.94	12.18	12.82	13.91
	6H	15.90	16.44	16.78	17.33	18.43	11.74	12.28	12.62	13.17	14.27
	8H	16.07	16.58	16.95	17.47	18.58	11.87	12.37	12.75	13.26	14.37
	12H	16.17	16.62	17.07	17.53	18.65	11.93	12.39	12.84	13.30	14.42
8H	4H	15.36	15.87	16.24	16.76	17.87	11.60	12.11	12.48	13.00	14.11
	6H	15.92	16.34	16.83	17.27	18.38	12.12	12.54	13.03	13.47	14.58
	8H	16.13	16.50	17.05	17.43	18.56	12.30	12.68	13.23	13.60	14.73
	12H	16.27	16.60	17.19	17.51	18.70	12.43	12.75	13.35	13.67	14.85
12H	4H	15.32	15.77	16.22	16.68	17.80	11.61	12.07	12.51	12.98	14.09
	6H	15.90	16.27	16.82	17.19	18.32	12.16	12.54	13.08	13.46	14.59
	8H	16.12	16.44	17.04	17.36	18.54	12.38	12.70	13.30	13.62	14.80

END OF REPORT