

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: P918114

Luminaire Tested: DFN2DIP-TR3F0-070D050US930-RLFL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P918114
REPORT IS A COMBINATION OF REPORTS P900308 AND P897195
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-TR3F0-070D050US930-RLLFLL
Description: 3 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

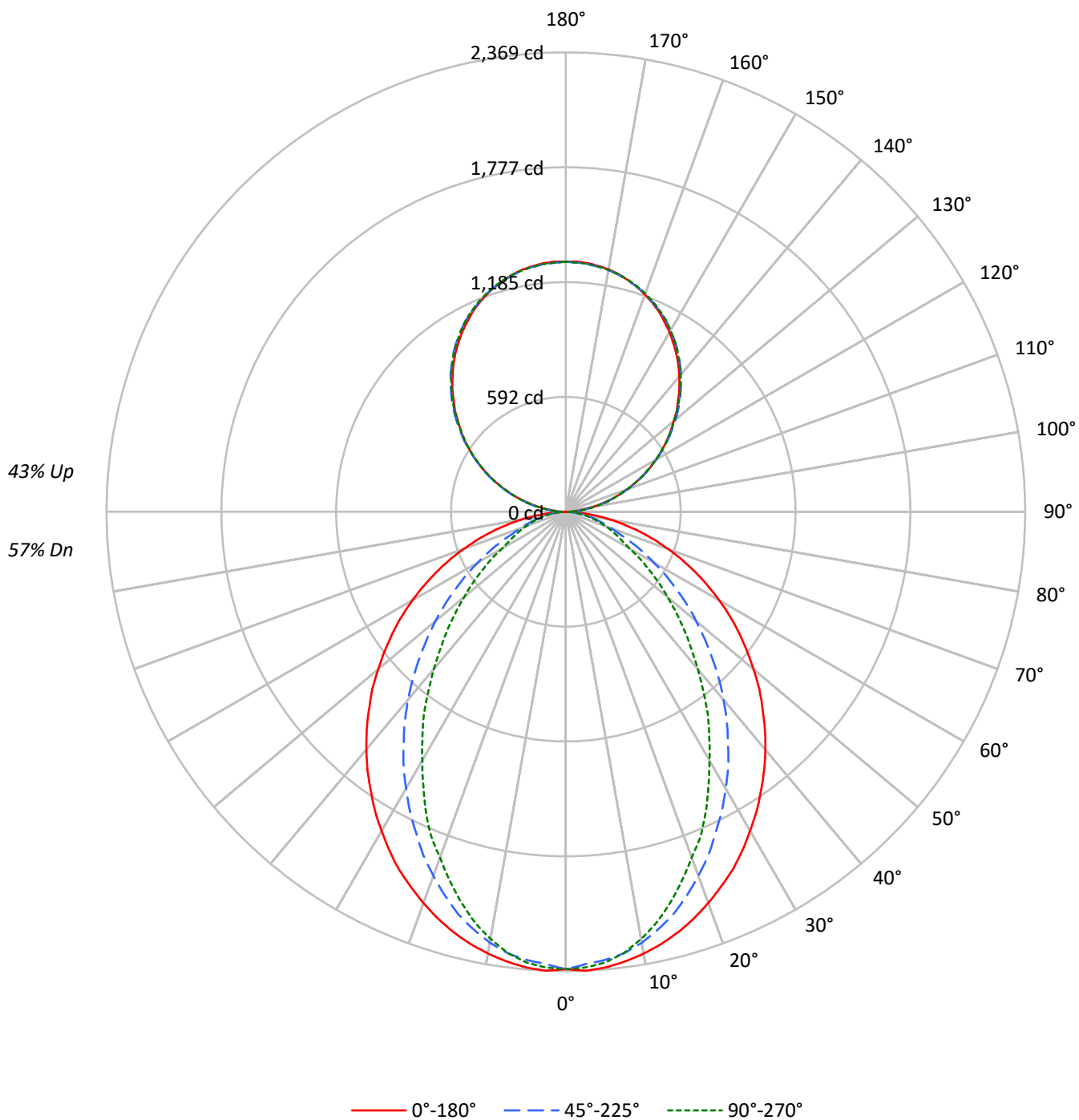
Lumens per Lamp: N/A
Luminaire Lumens: 8458.7 lumens
Efficiency: N/A
Efficacy: 78.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 2.74' x L: 3.16' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 107.3
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	109	109	109	109	101	101	101	101	87	87	87	75	75	75	63	63	63
1	100	96	92	89	93	89	86	83	78	75	73	67	65	63	56	55	54
2	92	84	78	73	85	79	74	69	69	65	61	59	56	54	50	48	47
3	84	75	68	62	78	70	64	59	61	56	52	53	49	46	45	42	40
4	77	66	59	53	72	62	56	50	55	49	45	47	43	40	41	38	35
5	71	60	52	46	66	56	49	44	49	44	39	43	39	35	37	34	31
6	66	54	46	40	61	51	43	38	45	39	35	39	34	31	34	30	28
7	61	49	41	35	57	46	39	34	41	35	31	36	31	28	31	27	25
8	57	44	37	32	53	42	35	30	37	32	28	33	28	25	29	25	22
9	53	41	33	28	49	38	32	27	34	29	25	30	26	23	26	23	20
10	49	37	30	26	46	35	29	25	32	26	23	28	24	21	25	21	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2939	2939	2939
5°	2942	2890	2909
10°	2912	2831	2813
15°	2870	2735	2664
20°	2815	2604	2483
25°	2759	2457	2308
30°	2685	2307	2087
35°	2611	2146	1893
40°	2537	1979	1671
45°	2450	1794	1470
50°	2361	1608	1273
55°	2267	1410	1084
60°	2159	1203	891
65°	2034	992	799
70°	1882	796	720
75°	1691	696	652
80°	1415	577	559
85°	963	373	408

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2450 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	221.1	2.6
10°-20°	606.9	7.2
20°-30°	852.0	10.1
30°-40°	928.8	11.0
40°-50°	853.6	10.1
50°-60°	670.4	7.9
60°-70°	436.4	5.2
70°-80°	224.6	2.7
80°-90°	61.0	0.7
90°-100°	79.8	0.9
100°-110°	253.5	3.0
110°-120°	433.8	5.1
120°-130°	570.5	6.7
130°-140°	640.4	7.6
140°-150°	627.9	7.4
150°-160°	526.8	6.2
160°-170°	349.3	4.1
170°-180°	122.1	1.4
0°-30°	1679.9	19.9
0°-40°	2608.7	30.8
0°-60°	4132.7	48.9
0°-90°	4854.7	57.4
90°-120°	767.0	9.1
90°-150°	2605.8	30.8
90°-180°	3604.0	42.6
0°-180°	8458.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2359	2359	2359	2359	2359	
5°	2359	2348	2320	2340	2333	224
15°	2244	2220	2147	2107	2086	632
25°	2036	1968	1827	1740	1708	937
35°	1755	1646	1458	1324	1276	1098
45°	1434	1291	1067	916	864	1108
55°	1091	924	694	566	525	975
65°	736	564	371	299	292	730
75°	393	243	171	156	154	415
85°	92	47	40	40	40	105
90°	1	14	38	36	37	8
95°	57	68	70	70	68	63
105°	234	237	240	241	241	247
115°	435	442	440	438	435	431
125°	633	643	640	636	635	566
135°	819	831	833	832	829	633
145°	994	1002	1008	1009	1005	621
155°	1137	1140	1144	1149	1145	523
165°	1237	1236	1236	1243	1238	349
175°	1287	1284	1282	1289	1283	122
180°	1289	1289	1289	1289	1289	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2358.7	2358.7	2358.7	2358.7	2358.7
2.5°	2369.3	2358.7	2335.2	2356.7	2352.4
5°	2358.7	2348.1	2320.3	2339.5	2333.1
7.5°	2339.5	2326.8	2296.9	2305.3	2294.7
10°	2313.9	2299.0	2256.3	2249.8	2237.1
12.5°	2281.9	2262.7	2205.0	2192.3	2168.7
15°	2243.5	2219.9	2147.4	2106.9	2085.6
17.5°	2198.6	2164.5	2074.8	2027.8	1993.6
20°	2147.4	2104.6	1998.0	1944.7	1897.6
22.5°	2092.0	2042.8	1918.9	1846.4	1814.5
25°	2036.5	1968.0	1827.2	1739.8	1707.6
27.5°	1970.3	1897.6	1741.8	1641.5	1592.4
30°	1899.9	1818.6	1647.8	1539.1	1481.4
32.5°	1831.5	1733.2	1558.4	1430.2	1376.7
35°	1754.7	1645.8	1458.1	1323.6	1276.4
37.5°	1680.0	1562.4	1364.1	1216.6	1163.4
40°	1600.9	1473.0	1265.8	1114.3	1058.7
42.5°	1519.9	1383.3	1167.7	1009.6	956.4
45°	1434.5	1291.4	1067.4	915.7	864.5
47.5°	1353.4	1201.9	971.3	819.6	772.7
50°	1263.7	1112.2	877.3	729.9	685.3
52.5°	1176.1	1015.9	787.7	646.8	606.3
55°	1090.7	924.2	693.7	565.7	525.2
57.5°	1003.3	832.5	610.6	491.0	456.8
60°	913.6	742.8	522.9	414.3	380.0
62.5°	826.1	655.4	448.2	345.8	328.8
65°	736.5	563.5	371.4	299.0	292.4
67.5°	651.1	478.1	299.0	262.4	256.2
70°	561.4	394.9	247.5	226.2	217.6
72.5°	476.1	318.0	207.0	190.0	185.7
75°	392.7	243.2	170.7	155.8	153.8
77.5°	309.6	172.8	134.5	125.9	121.6
80°	232.6	123.8	102.4	94.0	94.0
82.5°	162.2	83.3	70.4	66.1	66.1
85°	91.7	46.9	40.5	40.5	40.5
87.5°	34.2	17.0	17.0	14.9	14.9
90°	1.1	14.0	38.1	35.8	36.9
92.5°	24.1	32.6	33.8	35.0	35.0
95°	56.7	67.7	69.5	69.5	67.7
97.5°	94.4	104.5	108.8	108.8	108.8
100°	137.9	146.9	150.0	150.0	148.9
102.5°	183.8	190.5	194.7	195.9	194.7
105°	234.0	237.1	239.5	241.3	241.3
107.5°	283.7	288.4	288.4	289.2	283.7
110°	331.9	338.2	338.2	338.2	335.0

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	384.0	390.6	389.5	386.4	384.0
115°	435.3	441.6	439.6	438.5	435.3
117.5°	486.2	494.8	489.3	486.2	483.1
120°	537.5	546.1	537.5	537.5	534.0
122.5°	584.2	595.1	589.6	586.5	584.2
125°	633.2	642.9	639.8	636.3	635.1
127.5°	680.9	693.0	688.8	684.0	680.9
130°	725.7	739.6	737.7	735.4	731.1
132.5°	775.8	786.7	787.5	782.0	778.9
135°	819.0	831.0	833.3	832.2	829.1
137.5°	867.2	876.9	878.8	878.0	873.3
140°	909.5	919.2	924.6	924.6	920.4
142.5°	953.0	962.8	965.9	967.0	962.8
145°	994.3	1002.0	1008.2	1009.4	1005.1
147.5°	1031.2	1040.9	1045.5	1047.5	1043.2
150°	1069.3	1075.9	1080.1	1083.6	1080.1
152.5°	1103.1	1109.7	1115.1	1119.4	1115.1
155°	1136.9	1140.0	1143.5	1148.9	1145.4
157.5°	1166.0	1168.3	1170.3	1178.1	1172.6
160°	1192.0	1194.4	1195.6	1202.2	1197.5
162.5°	1216.2	1216.2	1217.3	1224.7	1219.3
165°	1236.8	1235.6	1235.6	1243.4	1237.9
167.5°	1255.4	1251.9	1251.9	1259.7	1254.3
170°	1269.4	1266.3	1265.2	1272.9	1266.3
172.5°	1279.1	1276.0	1274.9	1282.6	1276.0
175°	1286.9	1283.8	1281.5	1289.2	1282.6
177.5°	1291.2	1288.1	1285.7	1292.3	1285.7
180°	1289.2	1289.2	1289.2	1289.2	1289.2

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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	11.50	12.40	12.40	13.31	14.48	7.48	8.38	8.38	9.29	10.45
	3H	13.18	13.98	14.09	14.90	16.09	8.67	9.47	9.58	10.39	11.58
	4H	13.78	14.54	14.71	15.46	16.66	9.12	9.87	10.04	10.80	12.00
	6H	14.20	14.89	15.14	15.83	17.04	9.44	10.13	10.37	11.07	12.28
	8H	14.32	14.98	15.27	15.94	17.15	9.53	10.19	10.47	11.14	12.35
	12H	14.38	15.01	15.33	15.96	17.19	9.57	10.20	10.52	11.14	12.38
4H	2H	11.53	12.28	12.46	13.21	14.41	8.08	8.83	9.01	9.76	10.96
	3H	13.35	13.98	14.29	14.94	16.15	9.43	10.06	10.37	11.01	12.23
	4H	14.04	14.61	14.99	15.57	16.80	9.97	10.55	10.92	11.50	12.74
	6H	14.55	15.04	15.51	16.02	17.26	10.39	10.88	11.35	11.86	13.10
	8H	14.72	15.18	15.69	16.15	17.40	10.52	10.98	11.48	11.95	13.20
	12H	14.81	15.23	15.80	16.22	17.47	10.58	11.00	11.57	11.98	13.24
8H	4H	14.01	14.47	14.98	15.44	16.69	10.25	10.71	11.22	11.68	12.93
	6H	14.57	14.95	15.56	15.96	17.21	10.77	11.14	11.76	12.16	13.41
	8H	14.78	15.12	15.78	16.12	17.38	10.95	11.29	11.95	12.29	13.56
	12H	14.91	15.21	15.92	16.20	17.52	11.07	11.36	12.07	12.36	13.67
12H	4H	13.97	14.38	14.95	15.37	16.62	10.26	10.67	11.24	11.66	12.92
	6H	14.54	14.88	15.54	15.88	17.15	10.81	11.15	11.81	12.15	13.42
	8H	14.76	15.06	15.76	16.05	17.37	11.02	11.32	12.02	12.31	13.62

END OF REPORT