

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: P918127

Luminaire Tested: DFN2DIP-TR3F0-070D080US930-RLLONL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P918127
REPORT IS A COMBINATION OF REPORTS P901870 AND P898751
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-TR3F0-070D080US930-RLLONL
Description: 3 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Open No Lens
Light Source: -
Ballast/Driver: -

Summary

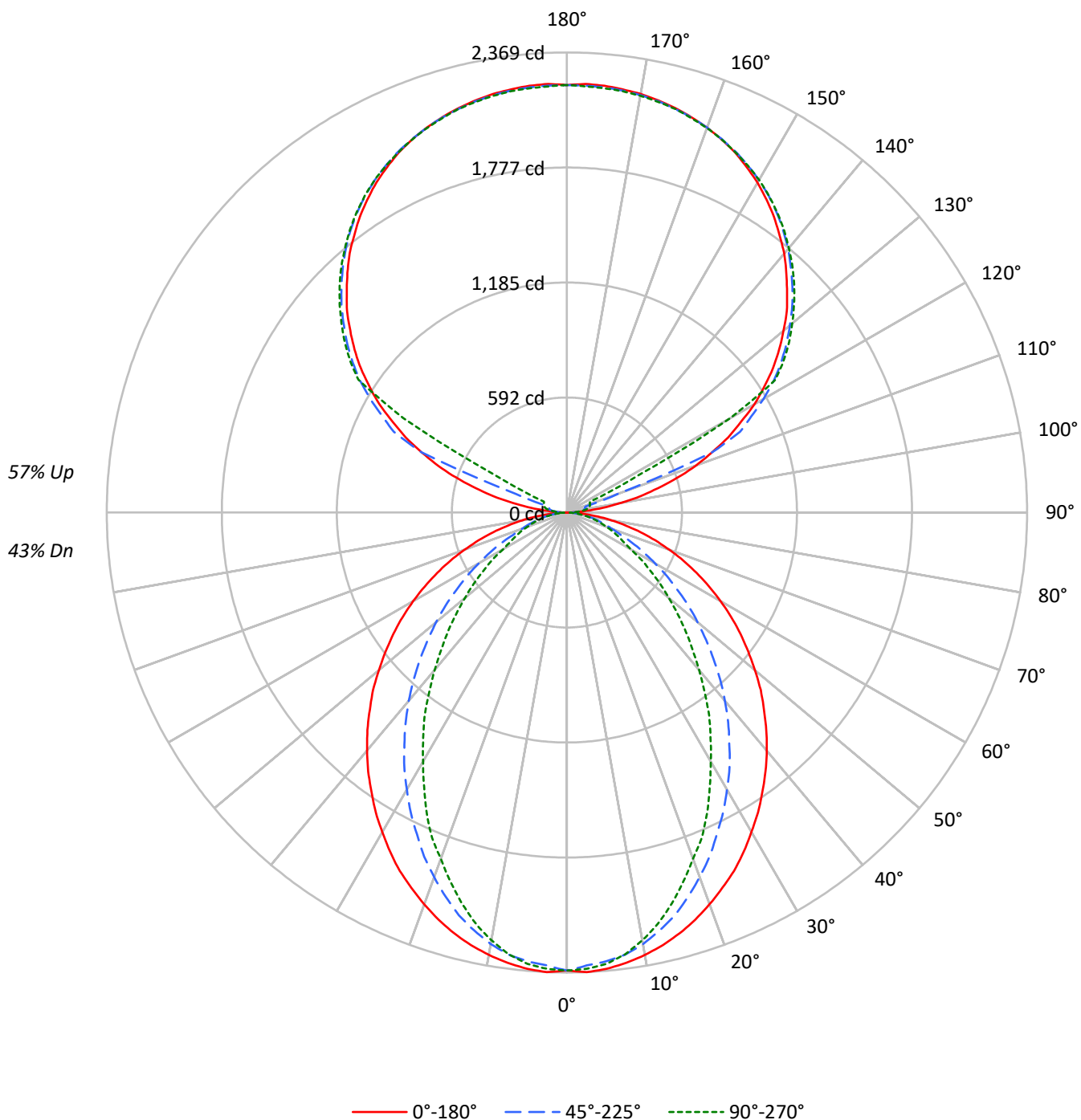
Lumens per Lamp: N/A
Luminaire Lumens: 11308.2 lumens
Efficiency: N/A
Efficacy: 86.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 2.74' x L: 3.16' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 131.3
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

TEST NUMBER: P918127

CATALOG NUMBER: DFN2DIP-TR3F0-070D080US930-RLLONL

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	105	105	105	105	96	96	96	96	79	79	79	64	64	64	50	50	50
1	97	92	89	85	88	85	82	79	70	68	66	57	55	54	44	44	43
2	88	81	75	70	81	75	70	65	62	58	55	50	48	46	40	38	37
3	81	72	65	59	74	66	60	55	55	51	47	45	42	39	36	33	32
4	74	64	56	50	68	59	52	47	49	44	40	40	37	34	32	30	28
5	68	57	49	43	62	53	46	41	44	39	35	36	33	30	29	26	24
6	63	51	43	38	57	47	40	35	40	35	31	33	29	26	26	24	22
7	58	46	39	33	53	43	36	31	36	31	27	30	26	23	24	21	19
8	54	42	35	29	49	39	32	28	33	28	24	28	24	21	22	20	17
9	50	38	31	26	46	36	29	25	30	25	22	25	22	19	21	18	16
10	47	35	28	24	43	33	27	22	28	23	20	24	20	17	19	16	14

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

TEST NUMBER: P918127

CATALOG NUMBER: DFN2DIP-TR3F0-070D080US930-RLLONL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	221.1	2.0
10°-20°	606.9	5.4
20°-30°	852.0	7.5
30°-40°	928.8	8.2
40°-50°	853.6	7.5
50°-60°	670.4	5.9
60°-70°	436.4	3.9
70°-80°	224.6	2.0
80°-90°	61.2	0.5
90°-100°	72.6	0.6
100°-110°	270.6	2.4
110°-120°	717.6	6.3
120°-130°	1190.2	10.5
130°-140°	1264.3	11.2
140°-150°	1175.0	10.4
150°-160°	944.7	8.4
160°-170°	608.7	5.4
170°-180°	209.5	1.9
0°-30°	1679.9	14.9
0°-40°	2608.7	23.1
0°-60°	4132.7	36.5
0°-90°	4854.9	42.9
90°-120°	1060.8	9.4
90°-150°	4690.4	41.5
90°-180°	6453.0	57.1
0°-180°	11308.2	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°	2	19	32	40	43	11
95°	104	51	62	70	68	123
105°	484	532	97	115	121	517
115°	916	943	983	245	131	902
125°	1295	1316	1346	1357	1362	1155
135°	1602	1628	1642	1658	1655	1238
145°	1859	1857	1884	1895	1887	1163
155°	2047	2032	2052	2061	2048	943
165°	2157	2147	2152	2163	2152	609
175°	2206	2195	2198	2209	2193	210
180°	2201	2201	2201	2201	2201	

TEST NUMBER: P918127

CATALOG NUMBER: DFN2DIP-TR3F0-070D080US930-RLLONL

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°	1.5	19.1	31.8	39.9	43.0
92.5°	39.9	33.5	38.2	41.4	43.0
95°	103.5	50.9	62.0	70.2	68.5
97.5°	186.3	55.8	81.1	86.1	87.6
100°	282.0	63.8	90.8	103.5	106.6
102.5°	387.0	383.9	94.0	111.4	116.3
105°	484.2	532.1	97.2	114.6	121.1
107.5°	597.3	637.0	100.4	117.8	124.3
110°	705.7	739.0	278.8	119.5	125.8

TEST NUMBER: P918127

CATALOG NUMBER: DFN2DIP-TR3F0-070D080US930-RLLONL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	807.6	836.2	809.2	122.5	127.5
115°	915.8	942.9	982.8	245.3	130.7
117.5°	1009.8	1041.6	1068.9	840.9	423.7
120°	1115.0	1138.8	1167.6	1186.7	971.6
122.5°	1204.0	1229.6	1261.6	1271.0	1272.8
125°	1294.9	1315.6	1345.9	1357.1	1361.8
127.5°	1377.7	1400.0	1424.1	1439.9	1441.4
130°	1455.8	1481.3	1498.8	1516.4	1514.8
132.5°	1535.5	1556.2	1573.7	1588.0	1586.5
135°	1602.4	1627.9	1642.1	1658.2	1655.0
137.5°	1672.4	1691.5	1707.6	1723.5	1718.7
140°	1740.8	1753.7	1771.2	1785.5	1777.5
142.5°	1798.4	1809.5	1830.1	1842.8	1834.8
145°	1858.9	1857.2	1884.2	1895.4	1887.4
147.5°	1911.3	1906.6	1933.6	1941.6	1935.3
150°	1962.3	1951.2	1976.7	1986.1	1978.2
152.5°	2005.3	1992.6	2016.4	2026.1	2014.9
155°	2046.7	2032.5	2051.6	2061.1	2048.4
157.5°	2080.2	2067.5	2081.9	2093.0	2080.2
160°	2108.9	2099.3	2108.9	2118.4	2107.2
162.5°	2134.3	2124.8	2132.7	2143.9	2129.6
165°	2156.6	2147.2	2151.9	2163.0	2151.9
167.5°	2174.2	2164.5	2169.4	2180.6	2166.2
170°	2188.6	2178.9	2182.1	2193.3	2178.9
172.5°	2198.0	2188.6	2191.8	2202.9	2188.6
175°	2206.0	2194.8	2198.0	2209.1	2193.3
177.5°	2209.1	2198.0	2199.7	2210.8	2196.5
180°	2201.2	2201.2	2201.2	2201.2	2201.2

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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	10.14	10.92	11.17	11.95	13.32	6.12	6.90	7.14	7.92	9.29
	3H	11.81	12.50	12.84	13.54	14.93	7.30	7.99	8.33	9.03	10.42
	4H	12.41	13.06	13.45	14.10	15.50	7.74	8.40	8.79	9.44	10.84
	6H	12.82	13.42	13.87	14.46	15.87	8.06	8.66	9.11	9.70	11.11
	8H	12.94	13.51	14.00	14.57	15.98	8.14	8.72	9.20	9.77	11.18
	12H	13.00	13.54	14.06	14.59	16.02	8.18	8.73	9.25	9.78	11.21
4H	2H	10.15	10.81	11.20	11.85	13.25	6.70	7.36	7.75	8.40	9.80
	3H	11.97	12.51	13.03	13.58	14.99	8.04	8.59	9.10	9.65	11.06
	4H	12.65	13.15	13.71	14.21	15.64	8.58	9.08	9.65	10.14	11.57
	6H	13.15	13.58	14.23	14.66	16.09	8.99	9.42	10.07	10.50	11.93
	8H	13.32	13.72	14.40	14.79	16.24	9.12	9.52	10.19	10.59	12.03
	12H	13.41	13.77	14.50	14.86	16.31	9.18	9.54	10.27	10.62	12.07
8H	4H	12.61	13.01	13.69	14.08	15.53	8.85	9.25	9.93	10.33	11.77
	6H	13.17	13.50	14.26	14.61	16.05	9.36	9.69	10.46	10.81	12.25
	8H	13.38	13.67	14.48	14.76	16.22	9.55	9.84	10.65	10.93	12.40
	12H	13.51	13.76	14.61	14.85	16.35	9.66	9.91	10.77	11.01	12.51
12H	4H	12.56	12.92	13.65	14.01	15.46	8.85	9.22	9.95	10.30	11.75
	6H	13.14	13.43	14.24	14.53	15.99	9.41	9.70	10.51	10.80	12.26
	8H	13.35	13.61	14.46	14.70	16.20	9.61	9.87	10.72	10.96	12.46

END OF REPORT