

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: P907006

Luminaire Tested: DFN2DIP-TR2F0-020D060US835-RLLFLL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P907006
REPORT IS A COMBINATION OF REPORTS P900262 AND P897145
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-TR2F0-020D060US835-RLLFLL
Description: 2 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

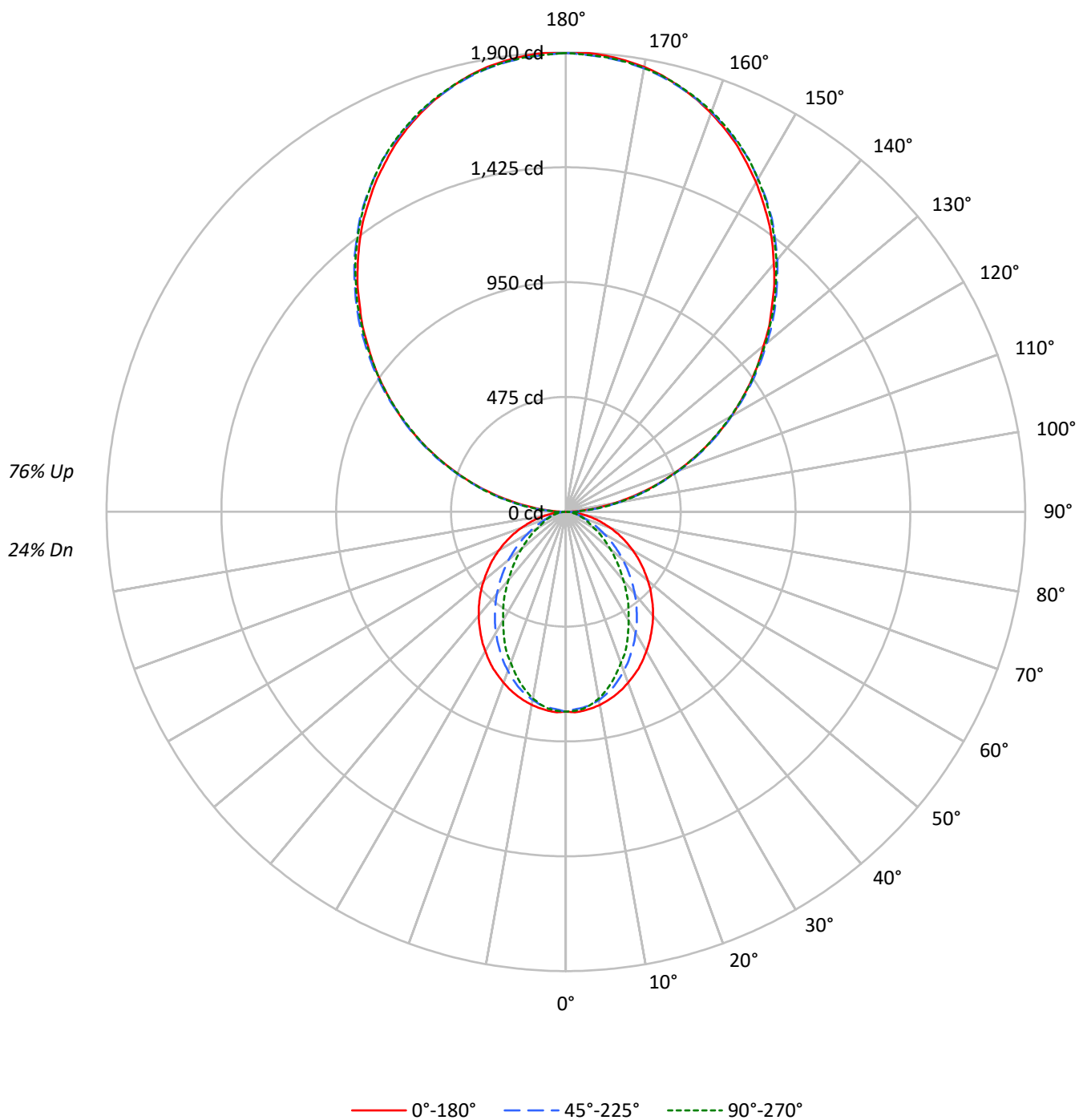
Lumens per Lamp: N/A
Luminaire Lumens: 7010.0 lumens
Efficiency: N/A
Efficacy: 110.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 2.04' x L: 2.36' x H: 0.1')
CIE Type: Semi-Indirect

Input Watts (W): 63.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9968
Total Harmonic Distortion (THDi): 0.064
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P907006

CATALOG NUMBER: DFN2DIP-TR2F0-020D060US835-RLLFLL

Luminous Intensity Polar Plot



TEST NUMBER: P907006

CATALOG NUMBER: DFN2DIP-TR2F0-020D060US835-RLLFLL

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	101	101	101	101		90	90	90	90		69	69	69		50	50	50		33	33	33
1	92	88	85	81		82	79	76	73		61	59	57		44	43	42		29	28	28
2	84	77	71	67		75	69	64	60		53	50	47		39	37	35		26	25	24
3	77	68	61	56		68	61	55	50		47	43	40		35	32	30		23	22	20
4	70	60	53	47		62	54	48	43		42	38	34		31	28	26		21	19	18
5	64	54	46	40		57	48	42	37		38	33	29		28	25	22		19	17	16
6	59	48	40	35		53	43	37	32		34	29	26		25	22	20		17	15	14
7	55	43	36	30		49	39	32	28		31	26	23		23	20	17		16	14	12
8	51	39	32	27		45	35	29	24		28	23	20		21	18	16		14	12	11
9	47	36	29	24		42	32	26	22		25	21	18		19	16	14		13	11	10
10	44	33	26	21		39	29	23	19		23	19	16		18	15	13		12	10	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1844	1844	1844
5°	1844	1810	1823
10°	1823	1771	1760
15°	1795	1708	1666
20°	1759	1624	1551
25°	1722	1530	1440
30°	1674	1434	1300
35°	1626	1331	1178
40°	1577	1225	1038
45°	1521	1108	911
50°	1463	991	788
55°	1401	866	669
60°	1331	735	548
65°	1249	604	490
70°	1149	480	439
75°	1024	415	393
80°	844	338	331
85°	554	209	233

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 90°

Luminance: 2476 cd/sqm

TEST NUMBER: P907006

CATALOG NUMBER: DFN2DIP-TR2F0-020D060US835-RLLFLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.5	1.1
10°-20°	212.7	3.0
20°-30°	298.6	4.3
30°-40°	325.5	4.6
40°-50°	299.1	4.3
50°-60°	234.9	3.4
60°-70°	152.9	2.2
70°-80°	78.7	1.1
80°-90°	25.5	0.4
90°-100°	117.4	1.7
100°-110°	373.1	5.3
110°-120°	638.5	9.1
120°-130°	839.7	12.0
130°-140°	942.5	13.4
140°-150°	924.2	13.2
150°-160°	775.3	11.1
160°-170°	514.2	7.3
170°-180°	179.7	2.6
0°-30°	588.7	8.4
0°-40°	914.2	13.0
0°-60°	1448.3	20.7
0°-90°	1705.4	24.3
90°-120°	1129.0	16.1
90°-150°	3835.4	54.7
90°-180°	5305.0	75.7
0°-180°	7010.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	827	827	827	827	827	
5°	827	823	813	820	818	78
15°	786	778	752	738	731	222
25°	714	690	640	610	598	328
35°	615	577	511	464	447	385
45°	503	452	374	321	303	388
55°	382	324	243	198	184	342
65°	258	198	130	105	102	256
75°	138	85	60	55	54	146
85°	32	16	14	14	14	37
90°	2	21	56	53	54	7
95°	84	100	102	102	100	93
105°	344	349	352	355	355	363
115°	641	650	647	645	641	634
125°	932	946	942	936	935	833
135°	1205	1223	1226	1225	1220	932
145°	1463	1475	1484	1486	1479	914
155°	1673	1678	1683	1691	1686	770
165°	1820	1819	1819	1830	1822	514
175°	1894	1890	1886	1898	1888	180
180°	1898	1898	1898	1898	1898	

TEST NUMBER: P907006

CATALOG NUMBER: DFN2DIP-TR2F0-020D060US835-RLLFLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	826.6	826.6	826.6	826.6	826.6
2.5°	830.3	826.6	818.3	825.9	824.4
5°	826.6	822.9	813.1	819.9	817.6
7.5°	819.9	815.4	804.9	807.9	804.1
10°	810.9	805.6	790.7	788.4	784.0
12.5°	799.7	792.9	772.7	768.3	760.0
15°	786.2	777.9	752.5	738.3	730.9
17.5°	770.5	758.5	727.1	710.6	698.7
20°	752.5	737.5	700.2	681.5	665.0
22.5°	733.1	715.9	672.5	647.1	635.9
25°	713.7	689.7	640.3	609.7	598.4
27.5°	690.5	665.0	610.4	575.2	558.0
30°	665.8	637.3	577.5	539.4	519.1
32.5°	641.8	607.4	546.1	501.2	482.5
35°	614.9	576.8	511.0	463.8	447.3
37.5°	588.7	547.5	478.0	426.4	407.7
40°	561.0	516.2	443.6	390.5	371.0
42.5°	532.6	484.8	409.2	353.8	335.2
45°	502.7	452.5	374.1	320.9	302.9
47.5°	474.3	421.2	340.4	287.2	270.8
50°	442.9	389.8	307.5	255.8	240.2
52.5°	412.1	356.0	276.0	226.7	212.5
55°	382.2	323.9	243.1	198.3	184.0
57.5°	351.6	291.7	214.0	172.1	160.1
60°	320.2	260.3	183.3	145.2	133.2
62.5°	289.5	229.7	157.1	121.2	115.2
65°	258.1	197.5	130.2	104.8	102.5
67.5°	228.2	167.5	104.8	92.0	89.8
70°	196.7	138.4	86.7	79.3	76.3
72.5°	166.8	111.4	72.5	66.6	65.1
75°	137.6	85.2	59.8	54.6	53.9
77.5°	108.5	60.6	47.1	44.1	42.6
80°	81.5	43.4	35.9	32.9	32.9
82.5°	56.8	29.2	24.7	23.2	23.2
85°	32.1	16.4	14.2	14.2	14.2
87.5°	12.0	6.0	6.0	5.2	5.2
90°	1.7	20.6	56.1	52.6	54.3
92.5°	35.5	48.1	49.8	51.5	51.5
95°	83.5	99.5	102.4	102.4	99.5
97.5°	139.0	153.9	160.2	160.2	160.2
100°	203.1	216.2	220.8	220.8	219.1
102.5°	270.6	280.3	286.6	288.3	286.6
105°	344.4	349.0	352.4	355.3	355.3
107.5°	417.6	424.5	424.5	425.6	417.6
110°	488.6	497.7	497.7	497.7	493.1

TEST NUMBER: P907006

CATALOG NUMBER: DFN2DIP-TR2F0-020D060US835-RLLFLL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	565.2	574.9	573.2	568.6	565.2
115°	640.7	649.9	647.0	645.3	640.7
117.5°	715.7	728.3	720.2	715.7	711.1
120°	791.2	803.8	791.2	791.2	786.0
122.5°	859.8	875.8	867.8	863.3	859.8
125°	931.9	946.2	941.6	936.5	934.8
127.5°	1002.3	1020.0	1013.7	1006.9	1002.3
130°	1068.1	1088.7	1085.8	1082.4	1076.1
132.5°	1141.9	1157.9	1159.0	1151.0	1146.4
135°	1205.4	1223.1	1226.5	1224.8	1220.2
137.5°	1276.3	1290.6	1293.5	1292.3	1285.5
140°	1338.7	1353.0	1361.0	1361.0	1354.7
142.5°	1402.7	1417.0	1421.6	1423.3	1417.0
145°	1463.4	1474.8	1484.0	1485.7	1479.4
147.5°	1517.7	1532.0	1538.9	1541.7	1535.4
150°	1573.8	1583.5	1589.8	1594.9	1589.8
152.5°	1623.5	1633.3	1641.3	1647.6	1641.3
155°	1673.3	1677.9	1683.0	1691.1	1685.9
157.5°	1716.2	1719.7	1722.5	1734.0	1726.0
160°	1754.6	1758.0	1759.7	1769.4	1762.6
162.5°	1790.0	1790.0	1791.7	1802.6	1794.6
165°	1820.3	1818.6	1818.6	1830.1	1822.1
167.5°	1847.8	1842.7	1842.7	1854.1	1846.1
170°	1868.4	1863.8	1862.1	1873.5	1863.8
172.5°	1882.7	1878.1	1876.4	1887.8	1878.1
175°	1894.1	1889.6	1886.1	1897.6	1887.8
177.5°	1900.4	1895.9	1892.4	1902.1	1892.4
180°	1897.6	1897.6	1897.6	1897.6	1897.6

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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	6.06	6.72	7.21	7.85	9.45	2.04	2.70	3.20	3.84	5.44
	3H	7.70	8.29	8.86	9.43	11.05	3.20	3.79	4.36	4.94	6.55
	4H	8.28	8.84	9.45	9.99	11.61	3.63	4.19	4.80	5.34	6.96
	6H	8.68	9.19	9.85	10.34	11.97	3.93	4.44	5.11	5.59	7.22
	8H	8.79	9.28	9.97	10.44	12.06	4.01	4.50	5.19	5.66	7.28
	12H	8.83	9.30	10.02	10.45	12.10	4.04	4.50	5.22	5.66	7.30
4H	2H	6.05	6.61	7.23	7.76	9.37	2.60	3.16	3.78	4.31	5.93
	3H	7.84	8.30	9.02	9.47	11.10	3.92	4.38	5.10	5.56	7.18
	4H	8.50	8.93	9.69	10.09	11.74	4.45	4.87	5.63	6.03	7.68
	6H	8.99	9.35	10.18	10.54	12.17	4.84	5.20	6.03	6.39	8.02
	8H	9.15	9.49	10.33	10.66	12.32	4.95	5.30	6.14	6.47	8.12
	12H	9.22	9.53	10.42	10.71	12.37	5.00	5.31	6.20	6.50	8.16
8H	4H	8.45	8.80	9.64	9.97	11.62	4.70	5.04	5.89	6.21	7.87
	6H	8.99	9.27	10.20	10.49	12.14	5.19	5.47	6.39	6.69	8.34
	8H	9.19	9.43	10.40	10.63	12.30	5.37	5.61	6.58	6.80	8.48
	12H	9.30	9.52	10.52	10.71	12.41	5.46	5.68	6.68	6.87	8.57
12H	4H	8.40	8.71	9.60	9.89	11.55	4.69	5.00	5.89	6.19	7.85
	6H	8.96	9.21	10.17	10.40	12.07	5.23	5.48	6.44	6.67	8.34
	8H	9.16	9.37	10.37	10.57	12.27	5.42	5.63	6.63	6.83	8.53

END OF REPORT