

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: P907066

Luminaire Tested: DFN2DIP-TR2F0-050D060US835-RLLFLL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P907066
REPORT IS A COMBINATION OF REPORTS P900268 AND P897145
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-TR2F0-050D060US835-RLLFLL
Description: 2 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

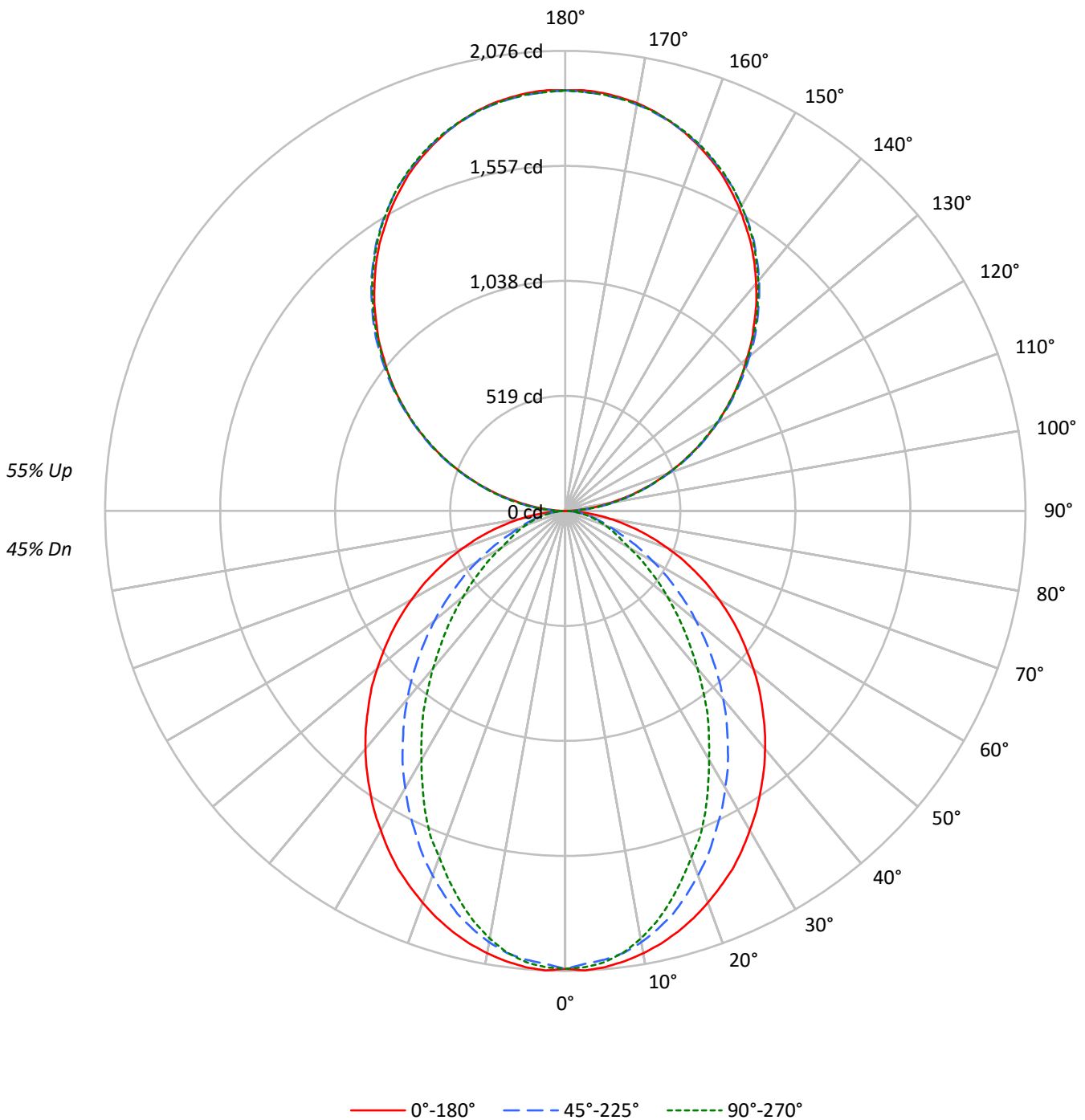
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9560.0 lumens
Efficiency: N/A
Efficacy: 99.7 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: General Diffuse

Input Watts (W): 95.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9789
Total Harmonic Distortion (THDi): 0.074
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	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	45	45	45	45
1	97	93	89	86	89	85	82	79	71	69	67	58	56	55	46	45	44	38	38	38	38
2	89	82	76	71	81	75	70	66	63	59	56	51	49	47	41	39	38	33	33	33	33
3	81	72	65	59	74	66	60	55	56	51	47	46	43	40	37	34	33	28	28	28	28
4	74	64	56	51	68	59	52	47	50	45	41	41	37	35	33	30	28	25	25	25	25
5	68	57	49	44	63	53	46	41	45	39	35	37	33	30	30	27	25	22	22	22	22
6	63	51	44	38	58	48	41	36	40	35	31	34	30	27	27	24	22	19	19	19	19
7	58	47	39	33	54	43	36	31	37	31	28	31	27	24	25	22	20	17	17	17	17
8	54	42	35	30	50	39	33	28	34	28	25	28	24	21	23	20	18	16	16	16	16
9	51	39	31	27	46	36	29	25	31	26	22	26	22	19	21	18	16	14	14	14	14
10	47	36	29	24	43	33	27	23	28	23	20	24	20	17	20	17	15	13	13	13	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4609	4609	4609
5°	4610	4526	4557
10°	4557	4427	4401
15°	4488	4271	4165
20°	4398	4059	3877
25°	4306	3824	3600
30°	4185	3585	3251
35°	4065	3328	2944
40°	3944	3063	2594
45°	3803	2771	2277
50°	3657	2477	1969
55°	3504	2164	1672
60°	3326	1838	1369
65°	3122	1509	1224
70°	2873	1201	1096
75°	2561	1039	982
80°	2111	843	828
85°	1386	523	583

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3803 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	193.7	2.0
10°-20°	531.7	5.6
20°-30°	746.5	7.8
30°-40°	813.7	8.5
40°-50°	747.9	7.8
50°-60°	587.3	6.1
60°-70°	382.3	4.0
70°-80°	196.8	2.1
80°-90°	55.6	0.6
90°-100°	117.4	1.2
100°-110°	373.1	3.9
110°-120°	638.5	6.7
120°-130°	839.7	8.8
130°-140°	942.5	9.9
140°-150°	924.2	9.7
150°-160°	775.3	8.1
160°-170°	514.2	5.4
170°-180°	179.7	1.9
0°-30°	1471.8	15.4
0°-40°	2285.5	23.9
0°-60°	3620.7	37.9
0°-90°	4255.4	44.5
90°-120°	1129.0	11.8
90°-150°	3835.4	40.1
90°-180°	5305.0	55.5
0°-180°	9560.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2066	2066	2066	2066	2066	
5°	2066	2057	2033	2050	2044	196
15°	1966	1945	1881	1846	1827	554
25°	1784	1724	1601	1524	1496	821
35°	1537	1442	1277	1160	1118	962
45°	1257	1131	935	802	757	971
55°	956	810	608	496	460	854
65°	645	494	325	262	256	640
75°	344	213	150	136	135	364
85°	80	41	36	36	36	92
90°	2	21	56	53	54	9
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	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2066.5	2066.5	2066.5	2066.5	2066.5
2.5°	2075.8	2066.5	2045.9	2064.7	2060.9
5°	2066.5	2057.2	2032.8	2049.6	2044.1
7.5°	2049.6	2038.5	2012.3	2019.7	2010.3
10°	2027.2	2014.1	1976.8	1971.1	1959.9
12.5°	1999.2	1982.4	1931.8	1920.7	1900.0
15°	1965.5	1944.9	1881.4	1845.9	1827.2
17.5°	1926.2	1896.3	1817.7	1776.6	1746.6
20°	1881.4	1843.9	1750.4	1703.8	1662.5
22.5°	1832.8	1789.7	1681.2	1617.7	1589.7
25°	1784.1	1724.2	1600.8	1524.2	1496.0
27.5°	1726.2	1662.5	1526.0	1438.1	1395.1
30°	1664.5	1593.3	1443.7	1348.4	1297.8
32.5°	1604.6	1518.5	1365.3	1253.0	1206.2
35°	1537.3	1441.9	1277.4	1159.5	1118.3
37.5°	1471.8	1368.9	1195.1	1065.9	1019.3
40°	1402.6	1290.5	1108.9	976.2	927.6
42.5°	1331.6	1211.9	1023.0	884.5	837.9
45°	1256.8	1131.4	935.1	802.2	757.3
47.5°	1185.7	1053.0	851.0	718.1	677.0
50°	1107.2	974.4	768.7	639.5	600.4
52.5°	1030.4	890.1	690.1	566.7	531.2
55°	955.6	809.7	607.7	495.6	460.1
57.5°	879.0	729.4	534.9	430.2	400.2
60°	800.4	650.8	458.1	362.9	332.9
62.5°	723.8	574.2	392.7	303.0	288.1
65°	645.2	493.7	325.4	261.9	256.2
67.5°	570.4	418.9	261.9	230.0	224.4
70°	491.9	346.0	216.9	198.2	190.7
72.5°	417.1	278.6	181.4	166.5	162.7
75°	344.1	213.1	149.6	136.5	134.7
77.5°	271.2	151.4	117.9	110.3	106.5
80°	203.8	108.5	89.7	82.3	82.3
82.5°	142.1	73.0	61.7	57.9	57.9
85°	80.4	41.1	35.5	35.5	35.5
87.5°	30.0	14.9	14.9	13.1	13.1
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



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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	11.79	12.58	12.80	13.59	14.94	7.77	8.56	8.78	9.57	10.92
	3H	13.44	14.15	14.46	15.17	16.54	8.94	9.65	9.96	10.67	12.04
	4H	14.03	14.70	15.06	15.72	17.10	9.38	10.05	10.41	11.07	12.45
	6H	14.43	15.04	15.47	16.08	17.47	9.68	10.30	10.73	11.33	12.72
	8H	14.55	15.13	15.59	16.18	17.56	9.77	10.35	10.81	11.40	12.78
	12H	14.60	15.15	15.65	16.19	17.60	9.80	10.36	10.85	11.40	12.81
4H	2H	11.80	12.47	12.84	13.49	14.87	8.35	9.02	9.39	10.04	11.42
	3H	13.60	14.15	14.64	15.21	16.60	9.68	10.23	10.72	11.29	12.68
	4H	14.27	14.78	15.32	15.82	17.24	10.21	10.72	11.26	11.76	13.18
	6H	14.76	15.20	15.82	16.27	17.67	10.61	11.04	11.67	12.11	13.52
	8H	14.92	15.33	15.98	16.39	17.81	10.73	11.13	11.79	12.20	13.62
	12H	15.00	15.37	16.08	16.45	17.87	10.78	11.15	11.86	12.23	13.65
8H	4H	14.23	14.64	15.29	15.70	17.12	10.47	10.88	11.54	11.94	13.37
	6H	14.77	15.11	15.86	16.21	17.63	10.97	11.30	12.05	12.41	13.83
	8H	14.97	15.27	16.06	16.35	17.79	11.15	11.44	12.24	12.53	13.97
	12H	15.09	15.35	16.19	16.43	17.91	11.25	11.51	12.35	12.59	14.07
12H	4H	14.18	14.55	15.26	15.62	17.05	10.47	10.84	11.55	11.92	13.34
	6H	14.74	15.04	15.84	16.13	17.57	11.01	11.30	12.10	12.39	13.83
	8H	14.95	15.20	16.04	16.29	17.77	11.20	11.46	12.30	12.55	14.03