

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: P906378

Luminaire Tested: DFN2DIP-SQ3F0-050D040US835-RLLFLL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P906378
REPORT IS A COMBINATION OF REPORTS P899864 AND P896733
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-SQ3F0-050D040US835-RLLFLL
Description: 3 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

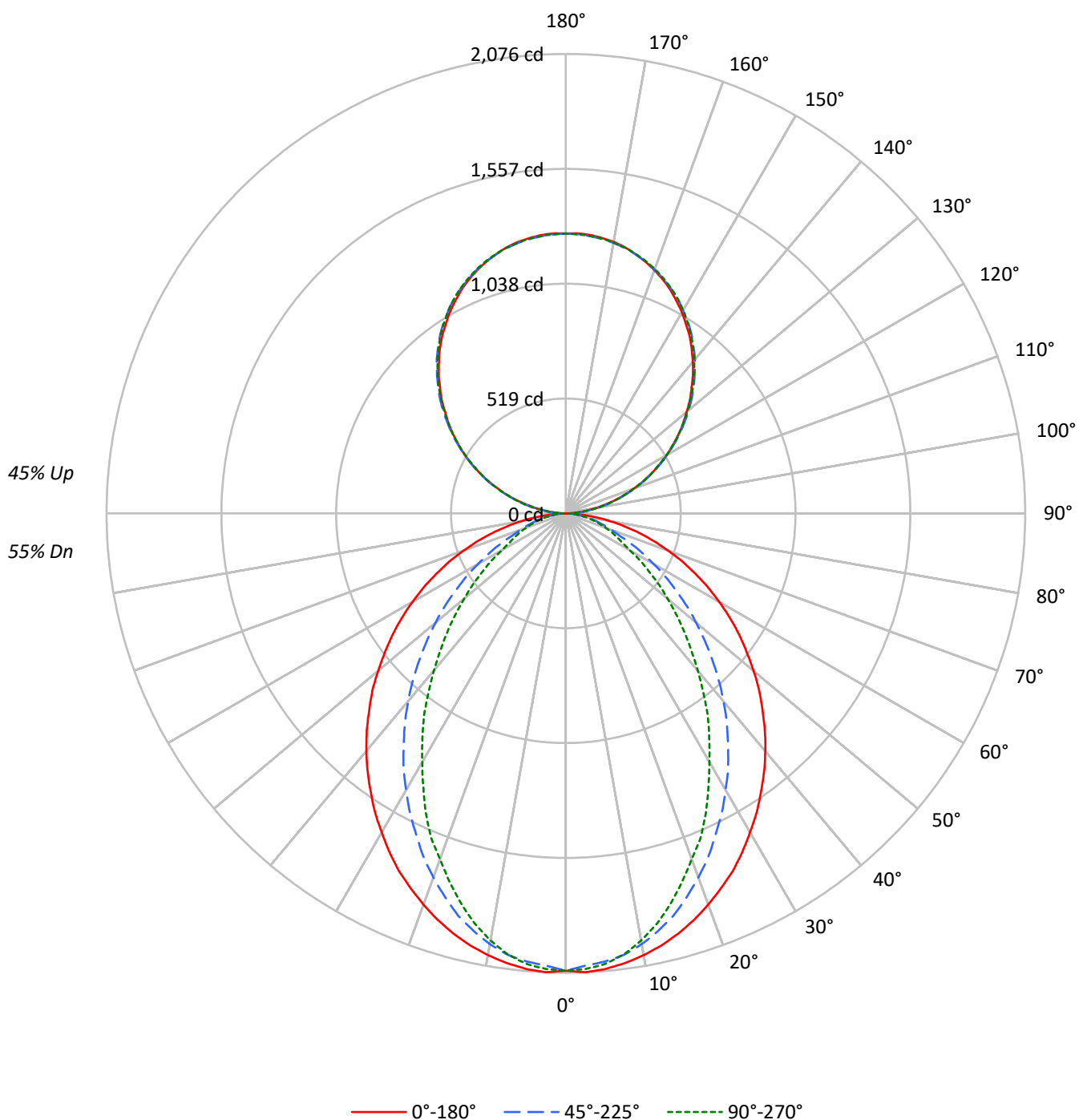
Lumens per Lamp: N/A
Luminaire Lumens: 7790.0 lumens
Efficiency: N/A
Efficacy: 107.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 3.06' x L: 3.06' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 72.5
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

TEST NUMBER: P906378

CATALOG NUMBER: DFN2DIP-SQ3F0-050D040US835-RLLFLL

Luminous Intensity Polar Plot



TEST NUMBER: P906378

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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	108	108	108	108	100	100	100	100	86	86	86	73	73	73	60	60	60
1	99	95	91	88	92	89	85	82	76	74	72	65	63	62	54	53	52
2	91	84	78	73	84	78	73	69	67	63	60	57	55	52	48	46	45
3	83	74	67	61	77	69	63	58	60	55	51	51	48	45	43	41	39
4	76	66	58	52	71	62	55	50	54	48	44	46	42	39	39	36	34
5	70	59	51	45	65	55	48	43	48	43	38	42	37	34	35	32	30
6	65	53	45	40	60	50	43	38	44	38	34	38	33	30	32	29	26
7	60	48	40	35	56	45	38	33	40	34	30	35	30	27	30	26	24
8	56	44	36	31	52	41	34	30	36	31	27	32	27	24	27	24	21
9	52	40	33	28	49	38	31	27	34	28	24	29	25	22	25	22	19
10	49	37	30	25	46	35	28	24	31	26	22	27	23	20	24	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2368	2368	2368
5°	2370	2329	2344
10°	2345	2281	2267
15°	2311	2205	2149
20°	2267	2099	2003
25°	2222	1981	1863
30°	2162	1861	1685
35°	2102	1731	1529
40°	2042	1597	1350
45°	1972	1448	1188
50°	1900	1299	1030
55°	1824	1139	878
60°	1736	972	722
65°	1635	803	649
70°	1512	645	586
75°	1358	565	532
80°	1135	469	458
85°	770	306	340

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1972 cd/sqm

TEST NUMBER: P906378

CATALOG NUMBER: DFN2DIP-SQ3F0-050D040US835-RLFL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	193.7	2.5
10°-20°	531.7	6.8
20°-30°	746.5	9.6
30°-40°	813.7	10.4
40°-50°	747.9	9.6
50°-60°	587.3	7.5
60°-70°	382.3	4.9
70°-80°	196.8	2.5
80°-90°	53.8	0.7
90°-100°	78.3	1.0
100°-110°	248.7	3.2
110°-120°	425.6	5.5
120°-130°	559.8	7.2
130°-140°	628.3	8.1
140°-150°	616.2	7.9
150°-160°	516.9	6.6
160°-170°	342.8	4.4
170°-180°	119.8	1.5
0°-30°	1471.8	18.9
0°-40°	2285.5	29.3
0°-60°	3620.7	46.5
0°-90°	4253.6	54.6
90°-120°	752.7	9.7
90°-150°	2556.9	32.8
90°-180°	3536.0	45.4
0°-180°	7790.0	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°	1	14	37	35	36	8
95°	56	66	68	68	66	62
105°	230	233	235	237	237	242
115°	427	433	431	430	427	422
125°	621	631	628	624	623	555
135°	804	815	818	816	814	621
145°	976	983	989	990	986	610
155°	1116	1119	1122	1127	1124	513
165°	1214	1212	1212	1220	1215	342
175°	1263	1260	1257	1265	1259	120
180°	1265	1265	1265	1265	1265	

TEST NUMBER: P906378

CATALOG NUMBER: DFN2DIP-SQ3F0-050D040US835-RLFL

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°	1.1	13.7	37.4	35.1	36.2
92.5°	23.6	32.0	33.2	34.3	34.3
95°	55.7	66.4	68.3	68.3	66.4
97.5°	92.7	102.6	106.8	106.8	106.8
100°	135.4	144.2	147.2	147.2	146.1
102.5°	180.4	186.9	191.1	192.2	191.1
105°	229.6	232.6	234.9	236.8	236.8
107.5°	278.4	283.0	283.0	283.7	278.4
110°	325.7	331.8	331.8	331.8	328.8

TEST NUMBER: P906378

CATALOG NUMBER: DFN2DIP-SQ3F0-050D040US835-RLLFLL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	376.8	383.3	382.1	379.1	376.8
115°	427.1	433.3	431.3	430.2	427.1
117.5°	477.1	485.5	480.2	477.1	474.1
120°	527.5	535.8	527.5	527.5	524.0
122.5°	573.2	583.9	578.6	575.5	573.2
125°	621.3	630.8	627.8	624.3	623.2
127.5°	668.2	680.0	675.8	671.2	668.2
130°	712.0	725.8	723.9	721.6	717.4
132.5°	761.2	771.9	772.7	767.3	764.3
135°	803.6	815.4	817.7	816.5	813.5
137.5°	850.9	860.4	862.3	861.5	857.0
140°	892.4	902.0	907.3	907.3	903.1
142.5°	935.2	944.7	947.7	948.9	944.7
145°	975.6	983.2	989.3	990.5	986.3
147.5°	1011.8	1021.3	1025.9	1027.8	1023.6
150°	1049.2	1055.7	1059.9	1063.3	1059.9
152.5°	1082.4	1088.8	1094.2	1098.4	1094.2
155°	1115.5	1118.6	1122.0	1127.4	1123.9
157.5°	1144.2	1146.4	1148.3	1156.0	1150.6
160°	1169.7	1172.0	1173.1	1179.6	1175.0
162.5°	1193.3	1193.3	1194.5	1201.7	1196.4
165°	1213.6	1212.4	1212.4	1220.0	1214.7
167.5°	1231.9	1228.4	1228.4	1236.1	1230.7
170°	1245.6	1242.5	1241.4	1249.0	1242.5
172.5°	1255.1	1252.1	1250.9	1258.6	1252.1
175°	1262.8	1259.7	1257.4	1265.0	1258.6
177.5°	1267.0	1263.9	1261.6	1268.1	1261.6
180°	1265.0	1265.0	1265.0	1265.0	1265.0

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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	10.53	11.40	11.45	12.33	13.54	6.49	7.36	7.41	8.29	9.50
	3H	12.20	12.98	13.14	13.93	15.16	7.67	8.45	8.61	9.40	10.63
	4H	12.81	13.54	13.76	14.50	15.74	8.12	8.85	9.07	9.81	11.05
	6H	13.23	13.91	14.19	14.86	16.11	8.44	9.11	9.40	10.07	11.32
	8H	13.36	14.00	14.32	14.97	16.22	8.53	9.17	9.49	10.14	11.39
	12H	13.42	14.03	14.39	14.99	16.27	8.57	9.18	9.54	10.15	11.42
4H	2H	10.55	11.28	11.50	12.23	13.47	7.09	7.82	8.04	8.77	10.01
	3H	12.38	12.99	13.34	13.97	15.22	8.43	9.04	9.40	10.02	11.28
	4H	13.07	13.62	14.04	14.60	15.88	8.98	9.53	9.95	10.51	11.79
	6H	13.58	14.06	14.56	15.05	16.33	9.39	9.87	10.38	10.87	12.14
	8H	13.75	14.20	14.74	15.19	16.48	9.52	9.96	10.50	10.95	12.25
	12H	13.85	14.25	14.85	15.26	16.55	9.58	9.98	10.58	10.99	12.29
8H	4H	13.03	13.48	14.02	14.47	15.76	9.26	9.70	10.24	10.69	11.99
	6H	13.60	13.97	14.61	15.00	16.29	9.77	10.14	10.78	11.17	12.46
	8H	13.81	14.14	14.83	15.16	16.46	9.95	10.28	10.97	11.30	12.61
	12H	13.95	14.23	14.97	15.25	16.60	10.07	10.35	11.09	11.37	12.72
12H	4H	12.99	13.39	13.99	14.40	15.69	9.26	9.66	10.27	10.67	11.97
	6H	13.57	13.90	14.59	14.92	16.23	9.81	10.14	10.84	11.16	12.47
	8H	13.79	14.08	14.81	15.09	16.44	10.02	10.31	11.04	11.32	12.68

END OF REPORT