

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: P914560

Luminaire Tested: DFN2DIP-SQ3F0-050D040US927-FLLFLL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P914560
REPORT IS A COMBINATION OF REPORTS P899863 AND P896733
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-SQ3F0-050D040US927-FLLFLL
Description: 3 foot, Square Define Geo, with Direct Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

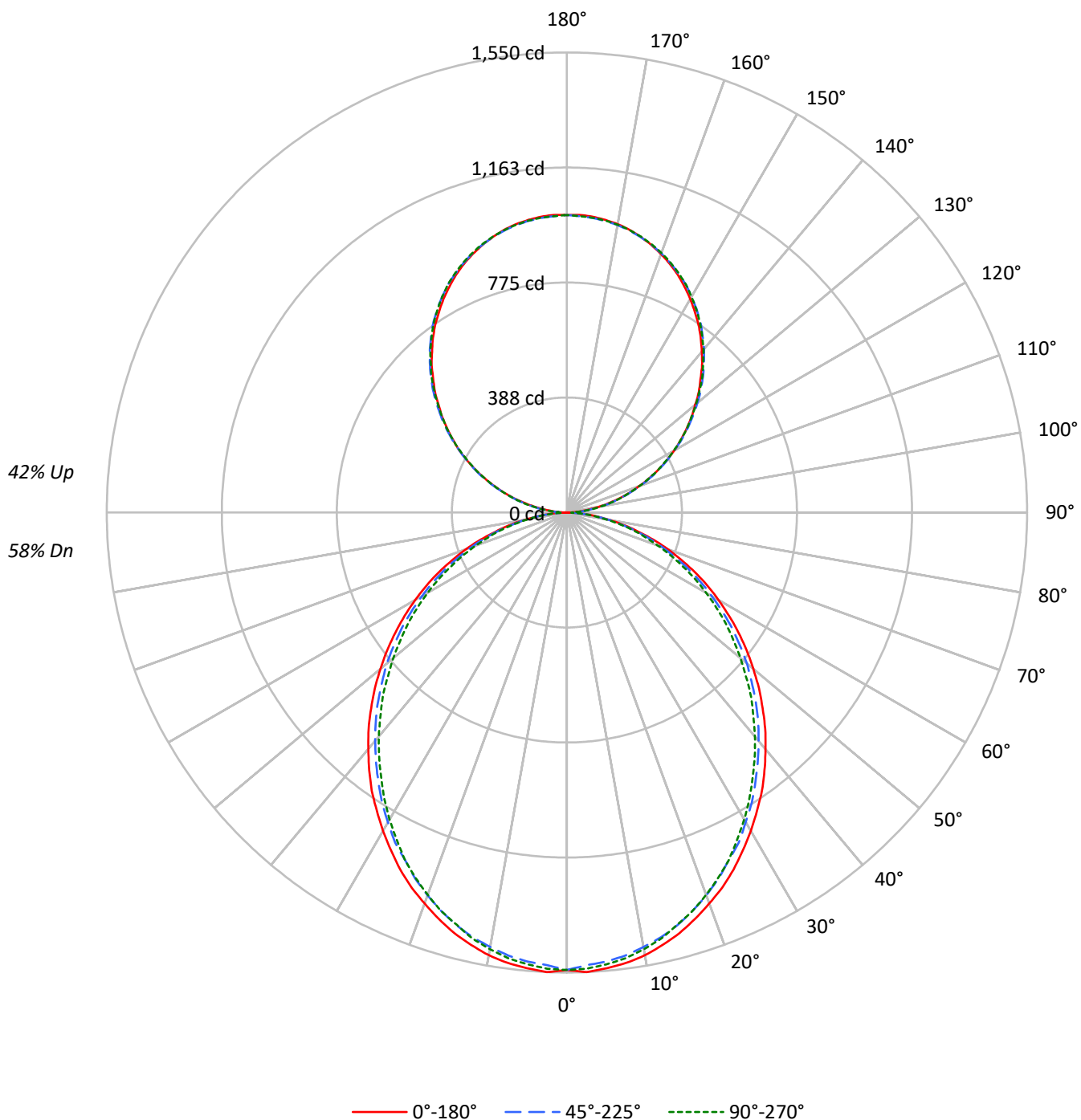
Lumens per Lamp: N/A
Luminaire Lumens: 6725.6 lumens
Efficiency: N/A
Efficacy: 92.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular w/ Sides (W: 3.06' x L: 3.06' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 72.5
Input Voltage (V): 120
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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CATALOG NUMBER: DFN2DIP-SQ3F0-050D040US927-FLLFL

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	102	102	102	102	88	88	88	75	75	75	64	64	64
1	100	95	91	88	93	89	86	82	77	75	72	66	65	63	56	55	54
2	91	83	77	72	84	78	72	68	68	64	60	58	55	52	50	47	45
3	83	73	66	60	77	69	62	57	60	55	50	52	48	44	44	41	39
4	76	65	57	51	70	61	54	48	53	47	43	46	42	38	39	36	33
5	70	58	50	43	65	54	47	41	48	42	37	41	37	33	35	32	29
6	64	52	44	38	60	49	41	36	43	37	32	37	33	29	32	29	26
7	59	47	39	33	55	44	37	32	39	33	29	34	29	26	29	26	23
8	55	43	35	29	51	40	33	28	36	30	26	31	26	23	27	23	20
9	51	39	31	26	48	37	30	25	33	27	23	29	24	21	25	21	18
10	48	36	28	24	45	34	27	23	30	25	21	27	22	19	23	19	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1766	1766	1766
5°	1768	1740	1752
10°	1752	1716	1728
15°	1725	1686	1691
20°	1689	1646	1652
25°	1654	1598	1608
30°	1609	1553	1551
35°	1567	1500	1492
40°	1515	1447	1435
45°	1463	1393	1377
50°	1406	1337	1310
55°	1347	1272	1248
60°	1279	1195	1177
65°	1206	1115	1093
70°	1112	1018	1003
75°	982	901	918
80°	826	752	759
85°	581	497	497

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1463 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.1	2.2
10°-20°	408.1	6.1
20°-30°	599.8	8.9
30°-40°	696.6	10.4
40°-50°	695.8	10.3
50°-60°	606.7	9.0
60°-70°	448.5	6.7
70°-80°	253.7	3.8
80°-90°	69.8	1.0
90°-100°	62.0	0.9
100°-110°	197.0	2.9
110°-120°	337.2	5.0
120°-130°	443.5	6.6
130°-140°	497.8	7.4
140°-150°	488.1	7.3
150°-160°	409.5	6.1
160°-170°	271.5	4.0
170°-180°	94.9	1.4
0°-30°	1153.0	17.1
0°-40°	1849.6	27.5
0°-60°	3152.1	46.9
0°-90°	3924.1	58.3
90°-120°	596.2	8.9
90°-150°	2025.6	30.1
90°-180°	2801.0	41.6
0°-180°	6725.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1541	1541	1541	1541	1541	
5°	1541	1535	1519	1531	1528	146
15°	1467	1458	1439	1445	1438	413
25°	1328	1316	1291	1294	1291	611
35°	1146	1131	1107	1098	1091	715
45°	932	922	900	883	877	719
55°	706	697	679	661	654	631
65°	476	467	452	439	431	470
75°	249	246	238	230	233	266
85°	61	59	58	53	52	68
90°	1	11	30	28	29	6
95°	44	53	54	54	53	49
105°	182	184	186	188	188	192
115°	338	343	342	341	338	335
125°	492	500	497	495	494	440
135°	637	646	648	647	644	492
145°	773	779	784	785	781	483
155°	884	886	889	893	890	407
165°	961	960	960	966	962	271
175°	1000	998	996	1002	997	95
180°	1002	1002	1002	1002	1002	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1541.2	1541.2	1541.2	1541.2	1541.2
2.5°	1550.1	1542.8	1526.5	1541.2	1538.4
5°	1541.2	1535.4	1519.0	1530.8	1528.0
7.5°	1530.8	1522.0	1505.7	1517.7	1514.7
10°	1514.7	1504.3	1486.5	1498.3	1493.9
12.5°	1492.3	1483.5	1465.8	1473.1	1470.1
15°	1467.1	1458.3	1439.0	1445.0	1437.6
17.5°	1436.0	1427.2	1407.9	1415.2	1407.9
20°	1401.9	1393.1	1372.4	1376.7	1370.9
22.5°	1367.9	1354.6	1335.2	1335.2	1332.2
25°	1327.9	1316.1	1290.9	1293.7	1290.9
27.5°	1283.3	1273.0	1253.8	1249.3	1242.0
30°	1239.0	1227.1	1204.9	1200.5	1194.5
32.5°	1191.5	1182.7	1159.0	1150.0	1144.1
35°	1145.6	1130.8	1107.1	1098.1	1090.8
37.5°	1093.7	1080.4	1056.6	1046.2	1038.9
40°	1040.5	1028.5	1004.7	991.5	985.6
42.5°	988.6	976.6	953.0	938.0	929.2
45°	932.2	921.9	899.5	883.4	877.3
47.5°	877.3	867.0	843.3	826.9	818.1
50°	819.5	812.1	791.4	770.6	763.2
52.5°	763.2	752.8	733.6	717.3	706.9
55°	705.5	696.6	678.7	661.0	653.6
57.5°	647.6	640.2	620.9	603.2	597.1
60°	589.8	584.0	563.2	546.8	542.5
62.5°	533.5	523.2	508.3	493.5	487.6
65°	475.8	466.8	452.0	438.7	431.3
67.5°	416.5	409.0	395.8	385.4	379.4
70°	361.6	355.7	342.3	331.9	326.1
72.5°	305.4	299.4	292.0	281.6	277.2
75°	248.9	246.1	238.5	229.7	232.7
77.5°	198.6	192.6	189.6	185.2	180.9
80°	148.3	146.7	143.7	139.3	136.3
82.5°	100.8	100.8	99.3	93.4	93.4
85°	60.7	59.3	57.8	53.3	51.9
87.5°	26.7	23.8	20.8	16.3	14.8
90°	0.9	10.9	29.6	27.8	28.7
92.5°	18.7	25.3	26.3	27.2	27.2
95°	44.1	52.6	54.1	54.1	52.6
97.5°	73.4	81.3	84.6	84.6	84.6
100°	107.3	114.2	116.6	116.6	115.7
102.5°	142.9	148.1	151.4	152.3	151.4
105°	181.9	184.3	186.1	187.6	187.6
107.5°	220.5	224.2	224.2	224.7	220.5
110°	258.0	262.8	262.8	262.8	260.5

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	298.5	303.6	302.7	300.3	298.5
115°	338.3	343.3	341.7	340.8	338.3
117.5°	377.9	384.6	380.4	377.9	375.6
120°	417.9	424.5	417.9	417.9	415.1
122.5°	454.1	462.6	458.4	455.9	454.1
125°	492.2	499.7	497.3	494.6	493.7
127.5°	529.3	538.7	535.4	531.7	529.3
130°	564.0	575.0	573.5	571.6	568.3
132.5°	603.0	611.5	612.1	607.8	605.5
135°	636.6	645.9	647.8	646.8	644.4
137.5°	674.1	681.6	683.1	682.5	678.9
140°	706.9	714.5	718.7	718.7	715.4
142.5°	740.8	748.4	750.8	751.7	748.4
145°	772.9	778.9	783.7	784.7	781.3
147.5°	801.5	809.1	812.7	814.2	810.9
150°	831.2	836.3	839.6	842.3	839.6
152.5°	857.5	862.5	866.8	870.1	866.8
155°	883.7	886.1	888.8	893.1	890.3
157.5°	906.4	908.2	909.7	915.8	911.5
160°	926.6	928.4	929.3	934.5	930.8
162.5°	945.3	945.3	946.3	952.0	947.8
165°	961.4	960.4	960.4	966.5	962.3
167.5°	975.9	973.1	973.1	979.2	974.9
170°	986.7	984.3	983.4	989.4	984.3
172.5°	994.3	991.9	990.9	997.0	991.9
175°	1000.4	997.9	996.1	1002.1	997.0
177.5°	1003.7	1001.2	999.4	1004.6	999.4
180°	1002.1	1002.1	1002.1	1002.1	1002.1

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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	9.95	10.89	10.83	11.79	12.94	9.51	10.45	10.39	11.35	12.50
	3H	11.61	12.46	12.50	13.37	14.54	11.12	11.97	12.02	12.88	14.05
	4H	12.20	13.00	13.11	13.92	15.10	11.71	12.50	12.61	13.42	14.60
	6H	12.60	13.34	13.52	14.26	15.46	12.10	12.84	13.02	13.76	14.96
	8H	12.71	13.41	13.63	14.35	15.54	12.20	12.91	13.13	13.85	15.04
	12H	12.75	13.42	13.69	14.36	15.58	12.25	12.91	13.18	13.85	15.07
4H	2H	10.42	11.21	11.33	12.13	13.31	10.06	10.86	10.98	11.78	12.96
	3H	12.28	12.95	13.21	13.90	15.10	11.88	12.54	12.80	13.49	14.69
	4H	13.00	13.61	13.93	14.55	15.77	12.57	13.18	13.51	14.13	15.35
	6H	13.51	14.04	14.46	15.01	16.23	13.08	13.61	14.03	14.57	15.80
	8H	13.66	14.15	14.61	15.11	16.35	13.22	13.72	14.18	14.68	15.91
	12H	13.74	14.18	14.71	15.16	16.40	13.29	13.73	14.26	14.71	15.95
8H	4H	13.20	13.69	14.15	14.65	15.88	12.82	13.31	13.77	14.27	15.51
	6H	13.82	14.23	14.80	15.23	16.47	13.44	13.85	14.42	14.85	16.08
	8H	14.04	14.40	15.03	15.39	16.65	13.65	14.01	14.64	15.00	16.25
	12H	14.18	14.49	15.17	15.48	16.78	13.76	14.08	14.75	15.07	16.37
12H	4H	13.18	13.63	14.16	14.61	15.85	12.82	13.26	13.79	14.24	15.48
	6H	13.85	14.21	14.84	15.21	16.46	13.48	13.84	14.47	14.83	16.09
	8H	14.10	14.41	15.09	15.40	16.70	13.71	14.03	14.70	15.02	16.32