

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: P905692

Luminaire Tested: DFN2DIP-PN3F0-030D070US835-FLLFLL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P905692
REPORT IS A COMBINATION OF REPORTS P899567 AND P896399
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-PN3F0-030D070US835-FLLFLL
Description: 3 foot, Pentagon Define Geo, with Direct Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

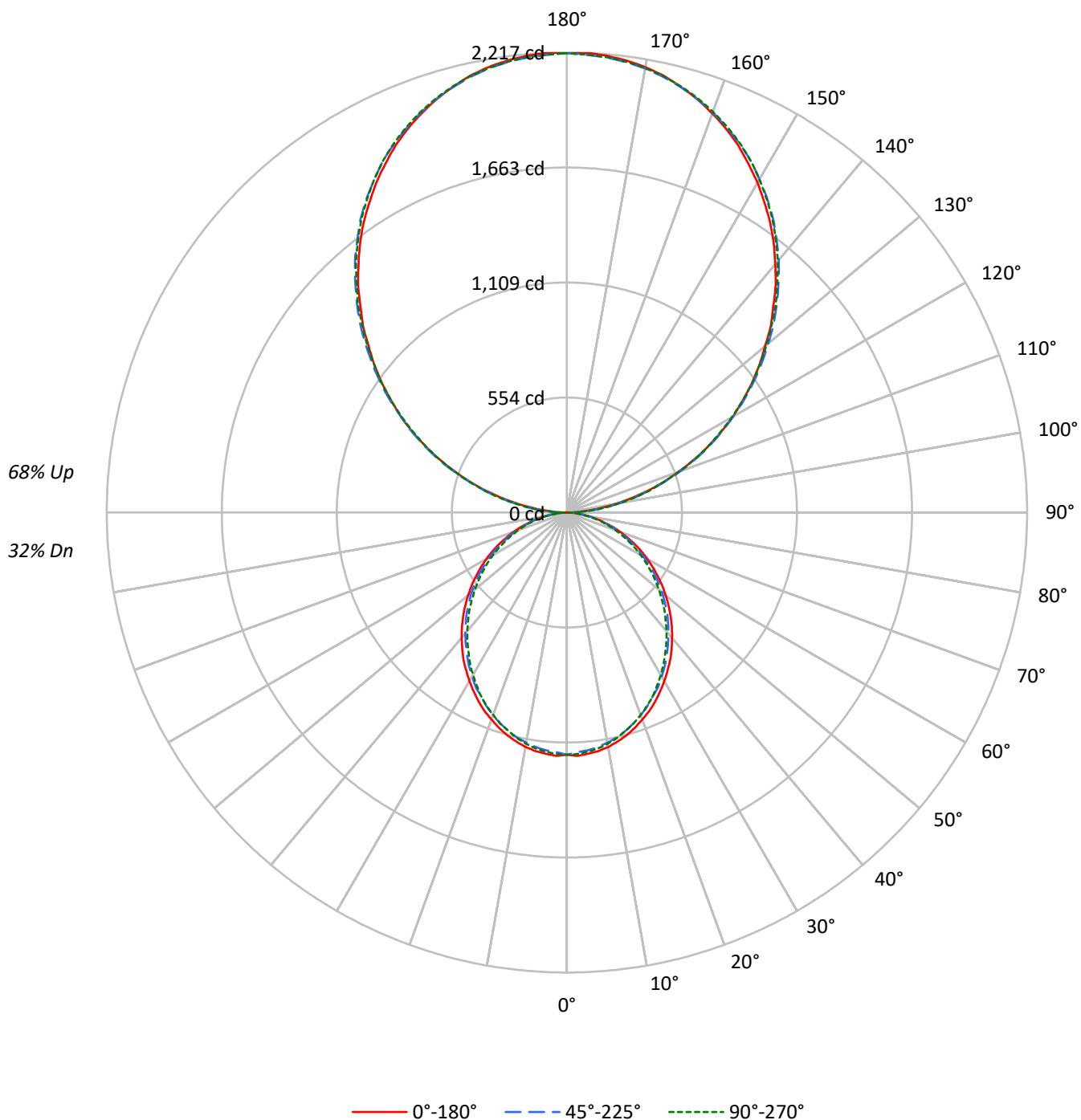
Lumens per Lamp: N/A
Luminaire Lumens: 9165.0 lumens
Efficiency: N/A
Efficacy: 117.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular w/ Sides (W: 2.96' x L: 3.11' x H: 0.1')
CIE Type: Semi-Indirect

Input Watts (W): 78.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.099
Total Harmonic Distortion (THDi): 0.979
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P905692

CATALOG NUMBER: DFN2DIP-PN3F0-030D070US835-FLLFLL

Luminous Intensity Polar Plot



TEST NUMBER: P905692

CATALOG NUMBER: DFN2DIP-PN3F0-030D070US835-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	103	103	103	103	93	93	93	93	74	74	74	56	56	56	40	40	40
1	94	90	86	82	84	81	78	75	64	62	60	49	48	47	35	34	34
2	85	78	72	67	77	71	66	61	56	53	50	43	41	39	31	30	28
3	78	69	62	56	70	62	56	51	50	45	42	38	35	33	28	26	24
4	71	61	53	47	64	55	48	43	44	39	36	34	31	28	25	23	21
5	65	54	46	40	59	49	42	37	39	34	31	30	27	24	22	20	18
6	60	48	40	35	54	44	37	32	35	30	27	27	24	21	20	18	16
7	55	43	36	30	50	40	33	28	32	27	23	25	21	19	18	16	14
8	51	39	32	27	46	36	29	25	29	24	21	23	19	17	17	14	13
9	48	36	29	24	43	33	26	22	27	22	18	21	17	15	15	13	11
10	44	33	26	21	40	30	24	20	24	20	16	19	16	13	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1365	1365	1365
5°	1366	1345	1354
10°	1354	1326	1335
15°	1333	1303	1306
20°	1306	1271	1276
25°	1278	1234	1242
30°	1244	1200	1198
35°	1211	1159	1152
40°	1171	1118	1108
45°	1131	1076	1063
50°	1087	1033	1011
55°	1041	982	963
60°	989	923	908
65°	933	861	843
70°	860	786	772
75°	760	695	707
80°	639	579	584
85°	451	383	380

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 90°

Luminance: 2193 cd/sqm

TEST NUMBER: P905692

CATALOG NUMBER: DFN2DIP-PN3F0-030D070US835-FLLFLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.9	1.2
10°-20°	309.1	3.4
20°-30°	454.3	5.0
30°-40°	527.6	5.8
40°-50°	527.0	5.7
50°-60°	459.5	5.0
60°-70°	339.7	3.7
70°-80°	192.2	2.1
80°-90°	57.0	0.6
90°-100°	137.0	1.5
100°-110°	435.3	4.7
110°-120°	744.9	8.1
120°-130°	979.6	10.7
130°-140°	1099.6	12.0
140°-150°	1078.3	11.8
150°-160°	904.5	9.9
160°-170°	599.9	6.5
170°-180°	209.7	2.3
0°-30°	873.3	9.5
0°-40°	1400.9	15.3
0°-60°	2387.4	26.0
0°-90°	2976.3	32.5
90°-120°	1317.2	14.4
90°-150°	4474.7	48.8
90°-180°	6189.0	67.5
0°-180°	9165.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1167	1167	1167	1167	1167	
5°	1167	1163	1150	1160	1157	111
15°	1111	1105	1090	1094	1089	313
25°	1006	997	978	980	978	463
35°	868	856	838	832	826	542
45°	706	698	681	669	664	545
55°	534	528	514	501	495	478
65°	360	354	342	332	327	356
75°	188	186	181	174	176	201
85°	46	45	44	40	39	51
90°	2	24	65	61	63	9
95°	97	116	120	120	116	108
105°	402	407	411	414	414	424
115°	748	758	755	753	748	739
125°	1087	1104	1099	1093	1091	972
135°	1406	1427	1431	1429	1424	1087
145°	1707	1721	1731	1733	1726	1067
155°	1952	1958	1964	1973	1967	899
165°	2124	2122	2122	2135	2126	599
175°	2210	2204	2200	2214	2202	210
180°	2214	2214	2214	2214	2214	

TEST NUMBER: P905692

CATALOG NUMBER: DFN2DIP-PN3F0-030D070US835-FLLFLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1167.3	1167.3	1167.3	1167.3	1167.3
2.5°	1174.1	1168.5	1156.1	1167.3	1165.2
5°	1167.3	1162.9	1150.5	1159.5	1157.3
7.5°	1159.5	1152.8	1140.4	1149.5	1147.2
10°	1147.2	1139.3	1125.9	1134.8	1131.5
12.5°	1130.3	1123.6	1110.2	1115.7	1113.5
15°	1111.2	1104.6	1089.9	1094.4	1088.8
17.5°	1087.6	1081.0	1066.3	1071.9	1066.3
20°	1061.8	1055.1	1039.4	1042.7	1038.3
22.5°	1036.1	1026.0	1011.3	1011.3	1009.0
25°	1005.7	996.8	977.7	979.9	977.7
27.5°	972.0	964.1	949.6	946.3	940.7
30°	938.4	929.4	912.6	909.2	904.7
32.5°	902.5	895.8	877.8	871.0	866.5
35°	867.7	856.5	838.5	831.7	826.1
37.5°	828.4	818.3	800.3	792.4	786.8
40°	788.0	779.0	761.0	751.0	746.5
42.5°	748.7	739.7	721.8	710.5	703.8
45°	706.1	698.2	681.3	669.0	664.5
47.5°	664.5	656.7	638.7	626.3	619.6
50°	620.7	615.1	599.4	583.7	578.1
52.5°	578.1	570.2	555.7	543.3	535.4
55°	534.4	527.6	514.1	500.7	495.1
57.5°	490.5	484.9	470.3	456.8	452.3
60°	446.7	442.3	426.6	414.2	410.9
62.5°	404.1	396.2	385.0	373.8	369.3
65°	360.4	353.6	342.4	332.3	326.7
67.5°	315.5	309.8	299.7	291.9	287.4
70°	273.9	269.4	259.3	251.4	247.0
72.5°	231.3	226.7	221.1	213.3	210.0
75°	188.5	186.4	180.7	174.0	176.3
77.5°	150.4	145.9	143.6	140.3	137.0
80°	112.3	111.1	108.8	105.5	103.3
82.5°	76.3	76.3	75.3	70.7	70.7
85°	46.0	44.9	43.8	40.4	39.3
87.5°	20.2	18.0	15.7	12.4	11.2
90°	2.0	24.0	65.4	61.4	63.4
92.5°	41.4	56.1	58.1	60.1	60.1
95°	97.4	116.1	119.5	119.5	116.1
97.5°	162.2	179.5	186.9	186.9	186.9
100°	236.9	252.3	257.6	257.6	255.6
102.5°	315.7	327.0	334.4	336.4	334.4
105°	401.8	407.1	411.1	414.5	414.5
107.5°	487.2	495.2	495.2	496.6	487.2
110°	570.0	580.7	580.7	580.7	575.3

TEST NUMBER: P905692

CATALOG NUMBER: DFN2DIP-PN3F0-030D070US835-FLLFLL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	659.4	670.8	668.8	663.4	659.4
115°	747.5	758.2	754.9	752.9	747.5
117.5°	834.9	849.6	840.3	834.9	829.6
120°	923.0	937.7	923.0	923.0	917.0
122.5°	1003.1	1021.8	1012.5	1007.1	1003.1
125°	1087.2	1103.9	1098.6	1092.6	1090.6
127.5°	1169.3	1190.0	1182.7	1174.7	1169.3
130°	1246.1	1270.1	1266.8	1262.8	1255.4
132.5°	1332.2	1350.9	1352.2	1342.9	1337.5
135°	1406.3	1426.9	1431.0	1428.9	1423.6
137.5°	1489.0	1505.7	1509.0	1507.7	1499.7
140°	1561.8	1578.5	1587.8	1587.8	1580.5
142.5°	1636.5	1653.2	1658.5	1660.5	1653.2
145°	1707.3	1720.6	1731.3	1733.3	1726.0
147.5°	1770.7	1787.4	1795.4	1798.7	1791.4
150°	1836.1	1847.4	1854.8	1860.8	1854.8
152.5°	1894.1	1905.5	1914.8	1922.2	1914.8
155°	1952.2	1957.5	1963.6	1972.9	1966.9
157.5°	2002.3	2006.3	2009.6	2023.0	2013.6
160°	2047.0	2051.0	2053.0	2064.3	2056.3
162.5°	2088.4	2088.4	2090.4	2103.0	2093.7
165°	2123.7	2121.7	2121.7	2135.1	2125.7
167.5°	2155.8	2149.8	2149.8	2163.1	2153.8
170°	2179.8	2174.5	2172.5	2185.8	2174.5
172.5°	2196.5	2191.1	2189.1	2202.5	2191.1
175°	2209.8	2204.5	2200.5	2213.8	2202.5
177.5°	2217.2	2211.8	2207.8	2219.2	2207.8
180°	2213.8	2213.8	2213.8	2213.8	2213.8

TEST NUMBER: P905692

CATALOG NUMBER: DFN2DIP-PN3F0-030D070US835-FLLFLL

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	6.42	7.15	7.52	8.24	9.74	5.98	6.71	7.08	7.80	9.30
	3H	8.07	8.71	9.17	9.82	11.33	7.58	8.23	8.69	9.33	10.85
	4H	8.64	9.26	9.76	10.36	11.89	8.16	8.77	9.27	9.88	11.40
	6H	9.03	9.60	10.15	10.70	12.24	8.54	9.11	9.66	10.21	11.75
	8H	9.13	9.67	10.26	10.79	12.32	8.64	9.18	9.77	10.30	11.83
	12H	9.17	9.68	10.30	10.80	12.35	8.67	9.19	9.80	10.30	11.85
4H	2H	6.86	7.48	7.98	8.58	10.10	6.51	7.13	7.63	8.23	9.75
	3H	8.71	9.22	9.84	10.35	11.89	8.31	8.82	9.44	9.95	11.49
	4H	9.41	9.89	10.54	11.00	12.56	9.00	9.47	10.13	10.59	12.14
	6H	9.91	10.32	11.05	11.46	13.01	9.49	9.90	10.63	11.04	12.59
	8H	10.06	10.44	11.19	11.57	13.13	9.63	10.01	10.77	11.14	12.71
	12H	10.12	10.46	11.28	11.61	13.18	9.68	10.03	10.84	11.17	12.74
8H	4H	9.59	9.97	10.73	11.10	12.67	9.22	9.60	10.36	10.73	12.30
	6H	10.21	10.52	11.37	11.70	13.26	9.84	10.15	11.00	11.32	12.89
	8H	10.43	10.70	11.59	11.85	13.44	10.04	10.32	11.21	11.47	13.05
	12H	10.55	10.79	11.72	11.94	13.55	10.15	10.39	11.32	11.54	13.16
12H	4H	9.57	9.92	10.73	11.06	12.63	9.21	9.55	10.36	10.70	12.27
	6H	10.24	10.51	11.40	11.67	13.25	9.88	10.15	11.04	11.30	12.88
	8H	10.47	10.71	11.64	11.86	13.48	10.10	10.34	11.27	11.49	13.11

END OF REPORT