

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: P905704

Luminaire Tested: DFN2DIP-PN3F0-040D030US835-FLLFLL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P905704
REPORT IS A COMBINATION OF REPORTS P899513 AND P896399
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-PN3F0-040D030US835-FLLFLL
Description: 3 foot, Pentagon Define Geo, with Direct Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

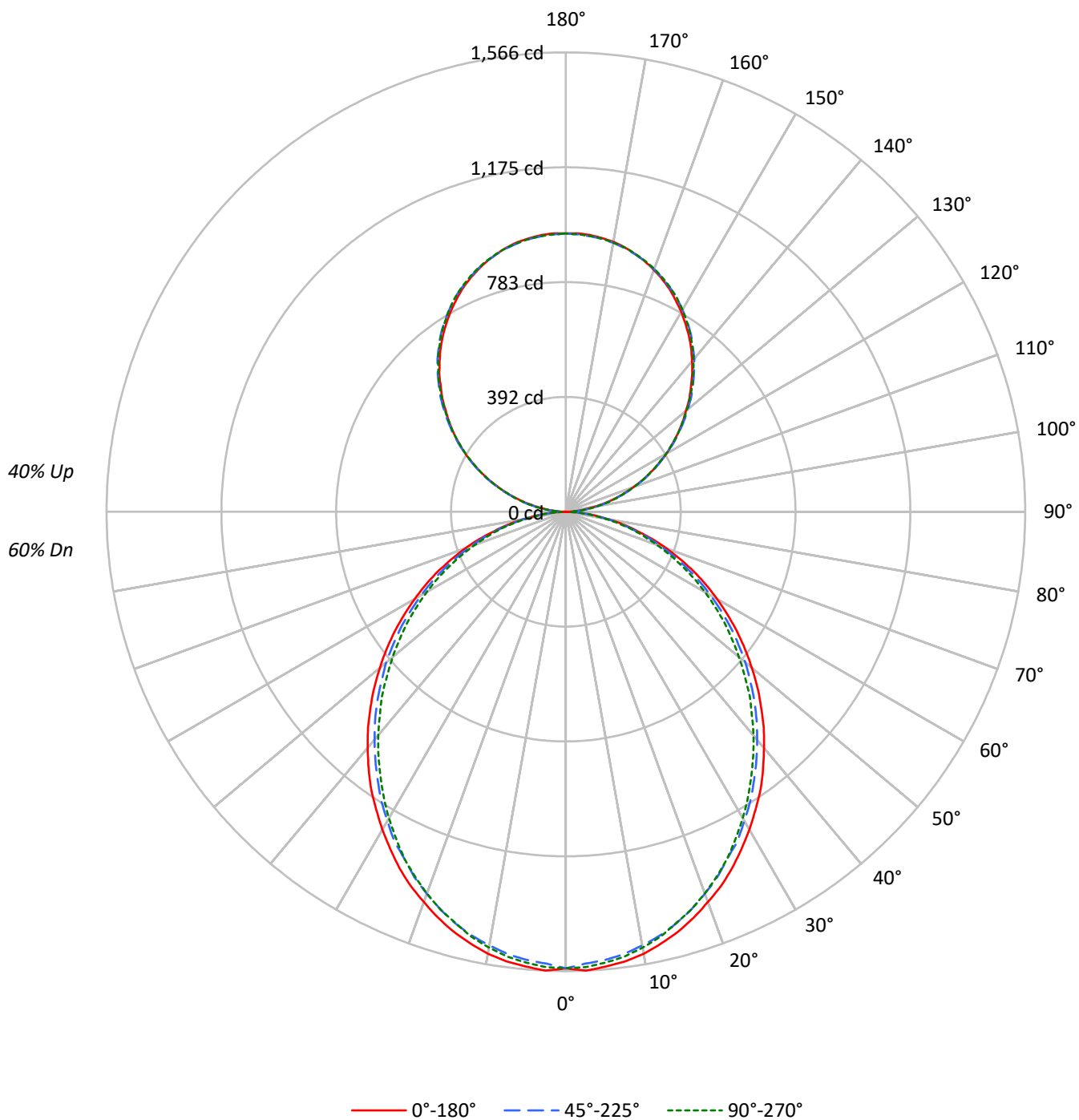
Lumens per Lamp: N/A
Luminaire Lumens: 6615.0 lumens
Efficiency: N/A
Efficacy: 114.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular w/ Sides (W: 2.96' x L: 3.11' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 58
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9972
Total Harmonic Distortion (THDi): 0.128
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P905704

CATALOG NUMBER: DFN2DIP-PN3F0-040D030US835-FLLFLL

Luminous Intensity Polar Plot



TEST NUMBER: P905704

CATALOG NUMBER: DFN2DIP-PN3F0-040D030US835-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	110	110	110	110	102	102	102	102	89	89	89	77	77	77	65	65	65
1	100	96	92	88	93	89	86	83	78	75	73	67	66	64	58	56	55
2	91	84	77	72	85	78	73	68	68	64	61	59	56	53	51	48	46
3	83	73	66	60	77	69	62	57	60	55	51	52	48	45	45	42	40
4	76	65	57	51	71	61	54	48	54	48	43	47	42	39	40	37	34
5	70	58	50	44	65	55	47	42	48	42	38	42	37	34	36	33	30
6	64	52	44	38	60	49	42	36	43	37	33	38	33	29	33	29	26
7	60	47	39	33	56	44	37	32	39	33	29	35	30	26	30	26	23
8	55	43	35	30	52	40	33	28	36	30	26	32	27	23	28	24	21
9	52	39	32	26	48	37	30	25	33	27	23	29	24	21	26	22	19
10	48	36	29	24	45	34	27	23	30	25	21	27	22	19	24	20	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1819	1819	1819
5°	1821	1793	1805
10°	1805	1767	1780
15°	1778	1737	1741
20°	1741	1695	1701
25°	1704	1646	1655
30°	1658	1599	1597
35°	1615	1545	1536
40°	1561	1490	1477
45°	1508	1435	1417
50°	1450	1377	1347
55°	1388	1310	1283
60°	1319	1230	1210
65°	1243	1148	1123
70°	1147	1047	1030
75°	1014	927	943
80°	852	773	778
85°	601	511	507

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1508 cd/sqm

TEST NUMBER: P905704

CATALOG NUMBER: DFN2DIP-PN3F0-040D030US835-FLLFLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.5	2.2
10°-20°	412.2	6.2
20°-30°	605.7	9.2
30°-40°	703.5	10.6
40°-50°	702.6	10.6
50°-60°	612.7	9.3
60°-70°	452.9	6.8
70°-80°	256.2	3.9
80°-90°	70.3	1.1
90°-100°	58.7	0.9
100°-110°	186.5	2.8
110°-120°	319.2	4.8
120°-130°	419.8	6.3
130°-140°	471.2	7.1
140°-150°	462.1	7.0
150°-160°	387.7	5.9
160°-170°	257.1	3.9
170°-180°	89.9	1.4
0°-30°	1164.4	17.6
0°-40°	1867.9	28.2
0°-60°	3183.2	48.1
0°-90°	3962.7	59.9
90°-120°	564.5	8.5
90°-150°	1917.7	29.0
90°-180°	2652.0	40.1
0°-180°	6615.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1556	1556	1556	1556	1556	
5°	1556	1550	1534	1546	1543	148
15°	1482	1473	1453	1459	1452	417
25°	1341	1329	1304	1306	1304	617
35°	1157	1142	1118	1109	1102	722
45°	941	931	908	892	886	727
55°	712	703	686	668	660	637
65°	480	471	456	443	436	475
75°	251	248	241	232	235	268
85°	61	60	58	54	52	68
90°	1	10	28	26	27	6
95°	42	50	51	51	50	46
105°	172	174	176	178	178	182
115°	320	325	324	323	320	317
125°	466	473	471	468	467	416
135°	603	612	613	612	610	466
145°	732	737	742	743	740	457
155°	837	839	842	846	843	385
165°	910	909	909	915	911	257
175°	947	945	943	949	944	90
180°	949	949	949	949	949	

TEST NUMBER: P905704

CATALOG NUMBER: DFN2DIP-PN3F0-040D030US835-FLLFLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1556.4	1556.4	1556.4	1556.4	1556.4
2.5°	1565.5	1558.0	1541.5	1556.4	1553.6
5°	1556.4	1550.5	1534.0	1545.9	1543.1
7.5°	1545.9	1537.0	1520.5	1532.6	1529.6
10°	1529.6	1519.1	1501.2	1513.1	1508.6
12.5°	1507.0	1498.1	1480.2	1487.7	1484.6
15°	1481.6	1472.7	1453.2	1459.2	1451.8
17.5°	1450.2	1441.3	1421.8	1429.2	1421.8
20°	1415.7	1406.8	1385.9	1390.3	1384.5
22.5°	1381.4	1367.9	1348.4	1348.4	1345.4
25°	1340.9	1329.0	1303.6	1306.5	1303.6
27.5°	1296.0	1285.5	1266.2	1261.7	1254.3
30°	1251.2	1239.2	1216.8	1212.3	1206.3
32.5°	1203.3	1194.4	1170.4	1161.4	1155.3
35°	1156.9	1142.0	1118.0	1109.0	1101.5
37.5°	1104.5	1091.0	1067.0	1056.6	1049.1
40°	1050.7	1038.6	1014.6	1001.3	995.3
42.5°	998.3	986.2	962.4	947.3	938.4
45°	941.4	931.0	908.4	892.1	886.0
47.5°	886.0	875.5	851.6	835.1	826.2
50°	827.6	820.1	799.2	778.2	770.7
52.5°	770.7	760.3	740.9	724.4	713.9
55°	712.5	703.4	685.5	667.5	660.1
57.5°	654.0	646.6	627.0	609.1	603.1
60°	595.6	589.7	568.8	552.3	547.8
62.5°	538.8	528.3	513.4	498.4	492.4
65°	480.5	471.4	456.5	443.0	435.6
67.5°	420.6	413.0	399.7	389.2	383.2
70°	365.2	359.2	345.7	335.2	329.3
72.5°	308.4	302.3	294.9	284.4	279.9
75°	251.4	248.5	240.9	232.0	235.0
77.5°	200.5	194.5	191.5	187.0	182.6
80°	149.7	148.1	145.1	140.7	137.7
82.5°	101.8	101.8	100.4	94.3	94.3
85°	61.3	59.9	58.4	53.8	52.4
87.5°	27.0	24.0	21.0	16.5	14.9
90°	0.9	10.3	28.0	26.3	27.2
92.5°	17.7	24.0	24.9	25.7	25.7
95°	41.8	49.8	51.2	51.2	49.8
97.5°	69.5	76.9	80.1	80.1	80.1
100°	101.5	108.1	110.4	110.4	109.6
102.5°	135.3	140.2	143.3	144.2	143.3
105°	172.2	174.5	176.2	177.6	177.6
107.5°	208.8	212.2	212.2	212.8	208.8
110°	244.3	248.9	248.9	248.9	246.6

TEST NUMBER: P905704

CATALOG NUMBER: DFN2DIP-PN3F0-040D030US835-FLLFLL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	282.6	287.5	286.6	284.3	282.6
115°	320.4	324.9	323.5	322.7	320.4
117.5°	357.8	364.1	360.1	357.8	355.5
120°	395.6	401.9	395.6	395.6	393.0
122.5°	429.9	437.9	433.9	431.6	429.9
125°	466.0	473.1	470.8	468.2	467.4
127.5°	501.1	510.0	506.9	503.4	501.1
130°	534.0	544.3	542.9	541.2	538.0
132.5°	570.9	578.9	579.5	575.5	573.2
135°	602.7	611.5	613.3	612.4	610.1
137.5°	638.1	645.3	646.7	646.2	642.7
140°	669.3	676.5	680.5	680.5	677.3
142.5°	701.4	708.5	710.8	711.7	708.5
145°	731.7	737.4	742.0	742.8	739.7
147.5°	758.9	766.0	769.4	770.9	767.7
150°	786.9	791.8	794.9	797.5	794.9
152.5°	811.8	816.6	820.6	823.8	820.6
155°	836.7	838.9	841.5	845.5	843.0
157.5°	858.1	859.8	861.3	867.0	863.0
160°	877.3	879.0	879.9	884.7	881.3
162.5°	895.0	895.0	895.9	901.3	897.3
165°	910.2	909.3	909.3	915.0	911.0
167.5°	923.9	921.3	921.3	927.0	923.0
170°	934.2	931.9	931.1	936.8	931.9
172.5°	941.3	939.1	938.2	943.9	939.1
175°	947.1	944.8	943.1	948.8	943.9
177.5°	950.2	947.9	946.2	951.1	946.2
180°	948.8	948.8	948.8	948.8	948.8

TEST NUMBER: P905704

CATALOG NUMBER: DFN2DIP-PN3F0-040D030US835-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	10.18	11.14	11.05	12.03	13.15	9.74	10.70	10.61	11.59	12.71
	3H	11.84	12.70	12.72	13.60	14.75	11.36	12.22	12.24	13.12	14.26
	4H	12.43	13.24	13.32	14.14	15.30	11.94	12.76	12.84	13.66	14.82
	6H	12.83	13.58	13.74	14.49	15.66	12.34	13.09	13.25	14.00	15.17
	8H	12.93	13.65	13.85	14.58	15.75	12.44	13.16	13.36	14.09	15.26
	12H	12.98	13.66	13.90	14.58	15.78	12.49	13.17	13.41	14.09	15.28
4H	2H	10.65	11.46	11.55	12.36	13.52	10.30	11.11	11.20	12.01	13.17
	3H	12.52	13.19	13.43	14.13	15.30	12.11	12.79	13.02	13.73	14.90
	4H	13.23	13.85	14.15	14.78	15.98	12.81	13.43	13.73	14.36	15.56
	6H	13.74	14.28	14.68	15.23	16.43	13.32	13.86	14.26	14.81	16.01
	8H	13.89	14.39	14.83	15.34	16.55	13.47	13.97	14.40	14.91	16.13
	12H	13.97	14.42	14.93	15.38	16.60	13.53	13.98	14.49	14.95	16.17
8H	4H	13.43	13.93	14.37	14.88	16.09	13.06	13.56	14.00	14.51	15.72
	6H	14.06	14.47	15.02	15.46	16.67	13.68	14.10	14.65	15.09	16.30
	8H	14.27	14.64	15.25	15.62	16.85	13.89	14.26	14.87	15.24	16.47
	12H	14.41	14.73	15.38	15.70	16.98	14.01	14.33	14.98	15.30	16.58
12H	4H	13.42	13.87	14.38	14.84	16.05	13.06	13.51	14.01	14.47	15.69
	6H	14.09	14.45	15.06	15.43	16.66	13.72	14.09	14.70	15.07	16.30
	8H	14.33	14.65	15.30	15.62	16.90	13.96	14.28	14.93	15.25	16.53