

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: P905698

Luminaire Tested: DFN2DIP-PN3F0-030D080US835-RLLFLL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P905698
REPORT IS A COMBINATION OF REPORTS P899582 AND P896399
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-PN3F0-030D080US835-RLLFLL
Description: 3 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

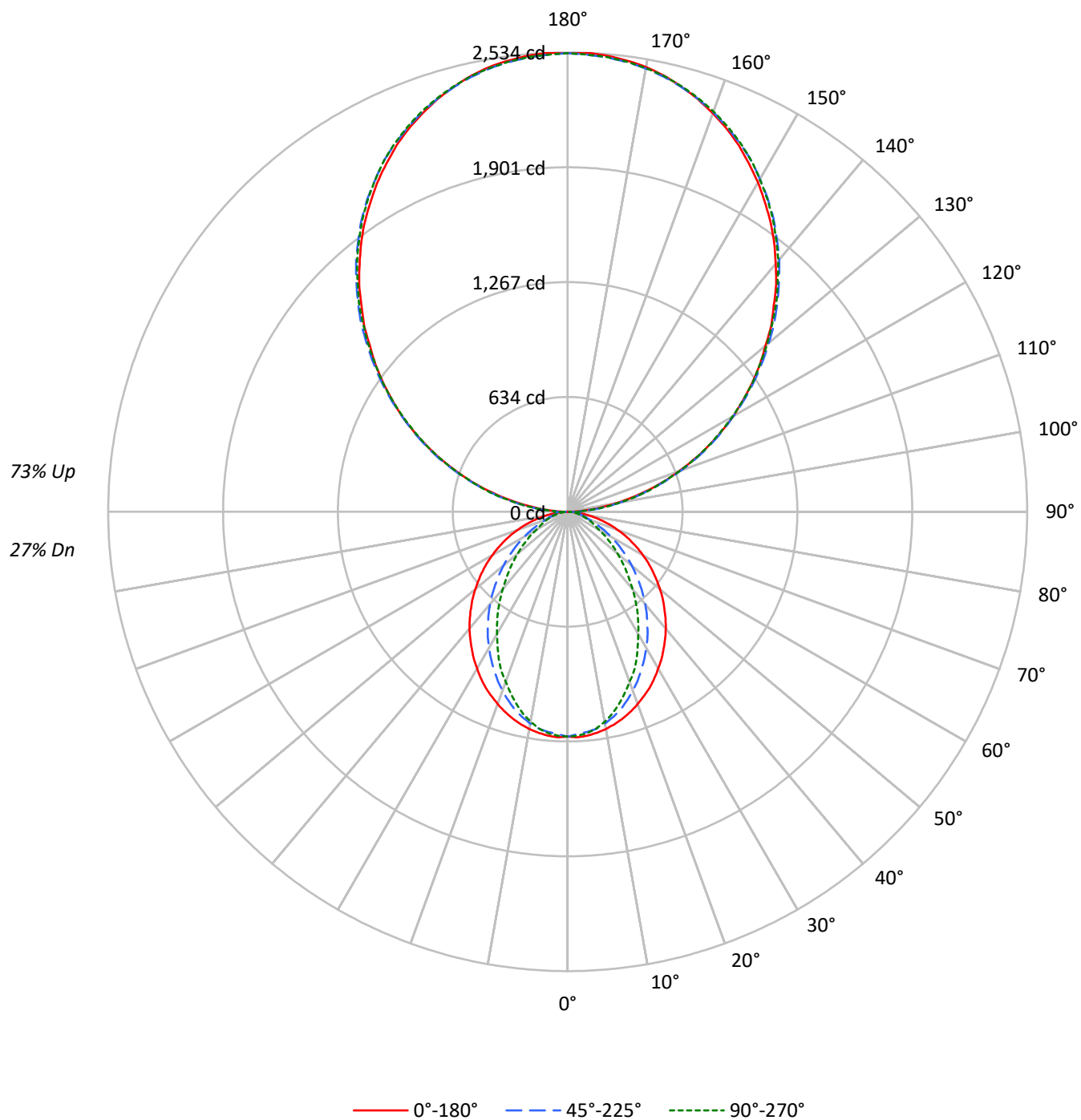
Lumens per Lamp: N/A
Luminaire Lumens: 9630.0 lumens
Efficiency: N/A
Efficacy: 112.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 2.96' x L: 3.11' x H: 0.1')
CIE Type: Semi-Indirect

Input Watts (W): 85.3
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: P905698

CATALOG NUMBER: DFN2DIP-PN3F0-030D080US835-RLLFLL

Luminous Intensity Polar Plot



TEST NUMBER: P905698

CATALOG NUMBER: DFN2DIP-PN3F0-030D080US835-RLFL

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	102	102	102	102	91	91	91	91	70	70	70	52	52	52	35	35	35
1	93	89	85	82	83	79	76	74	62	60	58	46	44	43	31	30	30
2	85	78	72	67	75	70	65	61	54	51	48	40	38	37	27	26	25
3	77	68	62	56	69	61	56	51	48	44	41	36	33	31	25	23	22
4	71	61	53	48	63	54	48	43	43	38	35	32	29	27	22	20	19
5	65	54	46	41	58	49	42	37	38	34	30	29	26	23	20	18	17
6	60	48	41	35	53	44	37	32	35	30	26	26	23	20	18	16	15
7	55	44	36	31	49	39	33	28	31	27	23	24	21	18	17	15	13
8	51	39	32	27	46	36	29	25	28	24	20	22	18	16	15	13	12
9	48	36	29	24	42	33	26	22	26	21	18	20	17	14	14	12	11
10	44	33	26	21	40	30	24	20	24	19	16	18	15	13	13	11	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1449	1449	1449
5°	1451	1425	1435
10°	1436	1396	1388
15°	1415	1349	1315
20°	1388	1285	1226
25°	1360	1213	1140
30°	1324	1139	1031
35°	1287	1059	935
40°	1251	977	826
45°	1208	886	727
50°	1164	795	630
55°	1117	697	537
60°	1063	595	441
65°	1002	491	396
70°	927	394	358
75°	832	345	324
80°	696	286	279
85°	473	186	206

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 90°

Luminance: 2508 cd/sqm

TEST NUMBER: P905698

CATALOG NUMBER: DFN2DIP-PN3F0-030D080US835-RLFL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.2	1.2
10°-20°	319.0	3.3
20°-30°	447.9	4.7
30°-40°	488.2	5.1
40°-50°	448.7	4.7
50°-60°	352.4	3.7
60°-70°	229.4	2.4
70°-80°	118.1	1.2
80°-90°	37.3	0.4
90°-100°	156.6	1.6
100°-110°	497.5	5.2
110°-120°	851.3	8.8
120°-130°	1119.6	11.6
130°-140°	1256.7	13.0
140°-150°	1232.3	12.8
150°-160°	1033.7	10.7
160°-170°	685.6	7.1
170°-180°	239.6	2.5
0°-30°	883.1	9.2
0°-40°	1371.3	14.2
0°-60°	2172.4	22.6
0°-90°	2557.2	26.6
90°-120°	1505.3	15.6
90°-150°	5113.9	53.1
90°-180°	7073.0	73.4
0°-180°	9630.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1240	1240	1240	1240	1240	
5°	1240	1234	1220	1230	1226	118
15°	1179	1167	1129	1108	1096	332
25°	1070	1034	960	914	898	492
35°	922	865	766	696	671	577
45°	754	679	561	481	454	582
55°	573	486	365	297	276	512
65°	387	296	195	157	154	384
75°	206	128	90	82	81	218
85°	48	25	21	21	21	55
90°	2	28	75	70	72	10
95°	111	133	136	136	133	124
105°	459	465	470	474	474	485
115°	854	866	863	860	854	845
125°	1242	1262	1256	1249	1246	1110
135°	1607	1631	1635	1633	1627	1242
145°	1951	1966	1979	1981	1972	1219
155°	2231	2237	2244	2255	2248	1027
165°	2427	2425	2425	2440	2429	685
175°	2526	2519	2515	2530	2517	240
180°	2530	2530	2530	2530	2530	

TEST NUMBER: P905698

CATALOG NUMBER: DFN2DIP-PN3F0-030D080US835-RLFL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1239.9	1239.9	1239.9	1239.9	1239.9
2.5°	1245.5	1239.9	1227.5	1238.8	1236.6
5°	1239.9	1234.3	1219.7	1229.8	1226.4
7.5°	1229.8	1223.1	1207.4	1211.8	1206.2
10°	1216.3	1208.5	1186.1	1182.6	1176.0
12.5°	1199.5	1189.4	1159.1	1152.4	1140.0
15°	1179.3	1166.9	1128.8	1107.5	1096.3
17.5°	1155.7	1137.8	1090.6	1066.0	1048.0
20°	1128.8	1106.3	1050.2	1022.3	997.5
22.5°	1099.7	1073.8	1008.7	970.6	953.8
25°	1070.5	1034.5	960.5	914.5	897.6
27.5°	1035.7	997.5	915.6	862.9	837.0
30°	998.7	956.0	866.2	809.1	778.7
32.5°	962.7	911.1	819.2	751.8	723.7
35°	922.4	865.1	766.4	695.7	671.0
37.5°	883.1	821.3	717.0	639.5	611.6
40°	841.6	774.3	665.4	585.7	556.6
42.5°	798.9	727.2	613.8	530.7	502.7
45°	754.1	678.8	561.1	481.3	454.4
47.5°	711.4	631.8	510.6	430.8	406.2
50°	664.3	584.6	461.2	383.7	360.2
52.5°	618.2	534.1	414.1	340.0	318.7
55°	573.3	485.8	364.6	297.4	276.1
57.5°	527.4	437.6	321.0	258.1	240.1
60°	480.2	390.5	274.9	217.7	199.8
62.5°	434.3	344.5	235.6	181.8	172.9
65°	387.1	296.2	195.2	157.1	153.7
67.5°	342.3	251.3	157.1	138.0	134.6
70°	295.1	207.6	130.1	118.9	114.4
72.5°	250.2	167.1	108.8	99.9	97.6
75°	206.4	127.9	89.8	81.9	80.8
77.5°	162.7	90.8	70.7	66.2	63.9
80°	122.3	65.1	53.8	49.4	49.4
82.5°	85.2	43.8	37.0	34.8	34.8
85°	48.2	24.6	21.3	21.3	21.3
87.5°	18.0	8.9	8.9	7.9	7.9
90°	2.3	27.5	74.8	70.2	72.5
92.5°	47.3	64.1	66.4	68.6	68.6
95°	111.4	132.7	136.5	136.5	132.7
97.5°	185.4	205.2	213.6	213.6	213.6
100°	270.8	288.3	294.4	294.4	292.1
102.5°	360.8	373.8	382.1	384.4	382.1
105°	459.2	465.3	469.9	473.7	473.7
107.5°	556.8	566.0	566.0	567.5	556.8
110°	651.4	663.6	663.6	663.6	657.5

TEST NUMBER: P905698

CATALOG NUMBER: DFN2DIP-PN3F0-030D080US835-RLLFLL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	753.6	766.6	764.3	758.2	753.6
115°	854.3	866.5	862.7	860.4	854.3
117.5°	954.2	971.0	960.3	954.2	948.1
120°	1054.9	1071.7	1054.9	1054.9	1048.0
122.5°	1146.4	1167.8	1157.1	1151.0	1146.4
125°	1242.5	1261.6	1255.5	1248.6	1246.4
127.5°	1336.4	1360.0	1351.6	1342.5	1336.4
130°	1424.1	1451.5	1447.7	1443.2	1434.8
132.5°	1522.5	1543.8	1545.4	1534.7	1528.6
135°	1607.1	1630.8	1635.4	1633.1	1627.0
137.5°	1701.7	1720.8	1724.6	1723.1	1713.9
140°	1784.9	1803.9	1814.6	1814.6	1806.2
142.5°	1870.3	1889.4	1895.5	1897.8	1889.4
145°	1951.2	1966.4	1978.6	1980.9	1972.5
147.5°	2023.6	2042.7	2051.8	2055.7	2047.3
150°	2098.4	2111.3	2119.7	2126.6	2119.7
152.5°	2164.7	2177.7	2188.4	2196.8	2188.4
155°	2231.1	2237.2	2244.1	2254.7	2247.9
157.5°	2288.3	2292.9	2296.7	2311.9	2301.3
160°	2339.4	2344.0	2346.3	2359.2	2350.1
162.5°	2386.7	2386.7	2389.0	2403.5	2392.8
165°	2427.1	2424.8	2424.8	2440.1	2429.4
167.5°	2463.7	2456.9	2456.9	2472.1	2461.4
170°	2491.2	2485.1	2482.8	2498.1	2485.1
172.5°	2510.3	2504.2	2501.9	2517.1	2504.2
175°	2525.5	2519.4	2514.8	2530.1	2517.1
177.5°	2533.9	2527.8	2523.2	2536.2	2523.2
180°	2530.1	2530.1	2530.1	2530.1	2530.1

TEST NUMBER: P905698

CATALOG NUMBER: DFN2DIP-PN3F0-030D080US835-RLFL

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	5.66	6.33	6.80	7.46	9.03	1.63	2.30	2.77	3.43	5.00
	3H	7.32	7.92	8.47	9.06	10.65	2.80	3.40	3.95	4.53	6.12
	4H	7.92	8.49	9.08	9.62	11.22	3.24	3.81	4.40	4.94	6.54
	6H	8.33	8.85	9.49	9.99	11.59	3.55	4.07	4.71	5.21	6.81
	8H	8.45	8.94	9.61	10.10	11.69	3.63	4.13	4.80	5.28	6.88
	12H	8.50	8.97	9.67	10.12	11.74	3.66	4.14	4.84	5.28	6.90
4H	2H	5.66	6.23	6.82	7.36	8.96	2.20	2.77	3.37	3.91	5.50
	3H	7.47	7.94	8.64	9.10	10.71	3.53	4.00	4.70	5.16	6.77
	4H	8.15	8.58	9.32	9.73	11.36	4.07	4.50	5.24	5.65	7.28
	6H	8.65	9.02	9.83	10.19	11.81	4.47	4.84	5.65	6.02	7.63
	8H	8.82	9.17	9.99	10.33	11.96	4.59	4.94	5.77	6.10	7.74
	12H	8.90	9.22	10.09	10.39	12.03	4.65	4.96	5.84	6.14	7.77
8H	4H	8.10	8.45	9.28	9.61	11.25	4.33	4.68	5.51	5.84	7.47
	6H	8.66	8.94	9.85	10.15	11.78	4.84	5.12	6.03	6.33	7.96
	8H	8.87	9.12	10.07	10.30	11.95	5.02	5.27	6.22	6.46	8.10
	12H	9.00	9.21	10.20	10.40	12.08	5.13	5.35	6.33	6.53	8.21
12H	4H	8.05	8.36	9.24	9.54	11.17	4.33	4.64	5.52	5.82	7.45
	6H	8.63	8.88	9.83	10.06	11.71	4.88	5.13	6.08	6.32	7.96
	8H	8.84	9.06	10.04	10.24	11.92	5.08	5.30	6.28	6.48	8.16

END OF REPORT