

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: P907003

Luminaire Tested: DFN2DIP-TR2F0-020D050US835-RLLONL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P907003
REPORT IS A COMBINATION OF REPORTS P901772 AND P897145
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-TR2F0-020D050US835-RLLONL
Description: 2 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Open No Lens
Light Source: -
Ballast/Driver: -

Summary

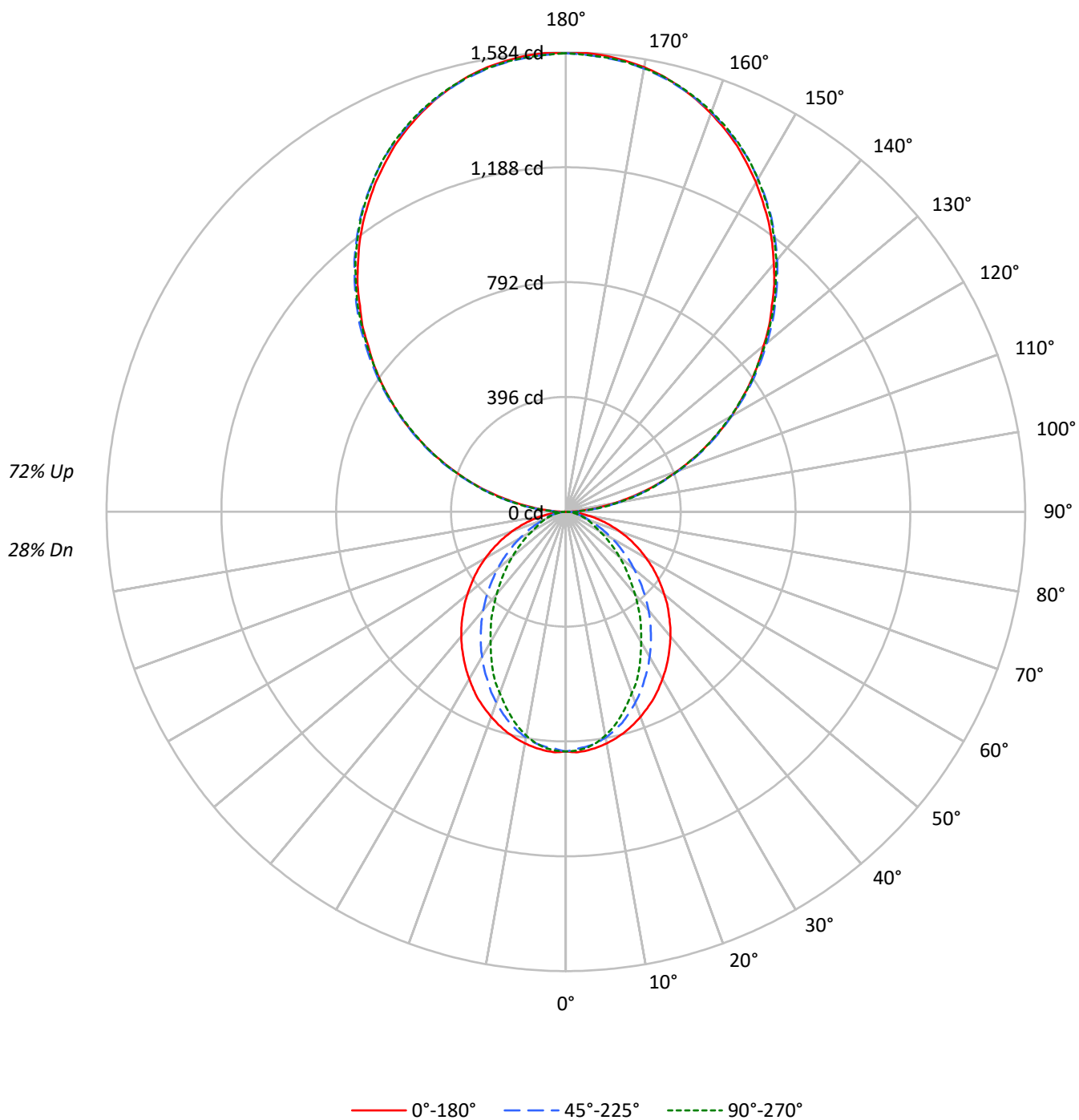
Lumens per Lamp: N/A
Luminaire Lumens: 6125.0 lumens
Efficiency: N/A
Efficacy: 114.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 2.04' x L: 2.36' x H: 0.1')
CIE Type: Semi-Indirect

Input Watts (W): 53.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9968
Total Harmonic Distortion (THDi): 0.064
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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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		71	71	71		53	53	53		36	36	36
1	93	89	85	82		83	80	77	74		62	60	59		47	45	44		32	31	31
2	85	78	72	67		76	70	65	61		55	52	49		41	39	37		28	27	26
3	78	69	62	56		69	62	56	51		49	45	41		37	34	32		25	24	23
4	71	61	53	48		63	55	48	44		43	39	35		33	30	27		23	21	20
5	65	54	47	41		58	49	42	37		39	34	31		29	26	24		21	19	17
6	60	49	41	35		54	44	37	32		35	30	27		27	23	21		19	17	15
7	55	44	36	31		50	40	33	28		32	27	23		24	21	19		17	15	14
8	51	40	32	27		46	36	30	25		29	24	21		22	19	16		16	14	12
9	48	36	29	24		43	33	27	22		26	22	19		20	17	15		15	13	11
10	45	33	26	22		40	30	24	20		24	20	17		19	16	13		14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1844	1844	1844
5°	1844	1810	1823
10°	1823	1771	1760
15°	1795	1708	1666
20°	1759	1624	1551
25°	1722	1530	1440
30°	1674	1434	1300
35°	1626	1331	1178
40°	1577	1225	1038
45°	1521	1108	911
50°	1463	991	788
55°	1401	866	669
60°	1331	735	548
65°	1249	604	490
70°	1149	480	439
75°	1024	415	393
80°	844	338	331
85°	554	209	233

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 90°

Luminance: 2065 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.5	1.3
10°-20°	212.7	3.5
20°-30°	298.6	4.9
30°-40°	325.5	5.3
40°-50°	299.1	4.9
50°-60°	234.9	3.8
60°-70°	152.9	2.5
70°-80°	78.7	1.3
80°-90°	24.6	0.4
90°-100°	97.8	1.6
100°-110°	310.9	5.1
110°-120°	532.1	8.7
120°-130°	699.7	11.4
130°-140°	785.4	12.8
140°-150°	770.2	12.6
150°-160°	646.1	10.5
160°-170°	428.5	7.0
170°-180°	149.8	2.4
0°-30°	588.7	9.6
0°-40°	914.2	14.9
0°-60°	1448.3	23.6
0°-90°	1704.5	27.8
90°-120°	940.8	15.4
90°-150°	3196.2	52.2
90°-180°	4421.0	72.2
0°-180°	6125.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	827	827	827	827	827	
5°	827	823	813	820	818	78
15°	786	778	752	738	731	222
25°	714	690	640	610	598	328
35°	615	577	511	464	447	385
45°	503	452	374	321	303	388
55°	382	324	243	198	184	342
65°	258	198	130	105	102	256
75°	138	85	60	55	54	146
85°	32	16	14	14	14	37
90°	1	17	47	44	45	6
95°	70	83	85	85	83	77
105°	287	291	294	296	296	303
115°	534	542	539	538	534	528
125°	777	788	785	780	779	694
135°	1004	1019	1022	1021	1017	776
145°	1220	1229	1237	1238	1233	762
155°	1394	1398	1402	1409	1405	642
165°	1517	1516	1516	1525	1518	428
175°	1578	1575	1572	1581	1573	150
180°	1581	1581	1581	1581	1581	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	826.6	826.6	826.6	826.6	826.6
2.5°	830.3	826.6	818.3	825.9	824.4
5°	826.6	822.9	813.1	819.9	817.6
7.5°	819.9	815.4	804.9	807.9	804.1
10°	810.9	805.6	790.7	788.4	784.0
12.5°	799.7	792.9	772.7	768.3	760.0
15°	786.2	777.9	752.5	738.3	730.9
17.5°	770.5	758.5	727.1	710.6	698.7
20°	752.5	737.5	700.2	681.5	665.0
22.5°	733.1	715.9	672.5	647.1	635.9
25°	713.7	689.7	640.3	609.7	598.4
27.5°	690.5	665.0	610.4	575.2	558.0
30°	665.8	637.3	577.5	539.4	519.1
32.5°	641.8	607.4	546.1	501.2	482.5
35°	614.9	576.8	511.0	463.8	447.3
37.5°	588.7	547.5	478.0	426.4	407.7
40°	561.0	516.2	443.6	390.5	371.0
42.5°	532.6	484.8	409.2	353.8	335.2
45°	502.7	452.5	374.1	320.9	302.9
47.5°	474.3	421.2	340.4	287.2	270.8
50°	442.9	389.8	307.5	255.8	240.2
52.5°	412.1	356.0	276.0	226.7	212.5
55°	382.2	323.9	243.1	198.3	184.0
57.5°	351.6	291.7	214.0	172.1	160.1
60°	320.2	260.3	183.3	145.2	133.2
62.5°	289.5	229.7	157.1	121.2	115.2
65°	258.1	197.5	130.2	104.8	102.5
67.5°	228.2	167.5	104.8	92.0	89.8
70°	196.7	138.4	86.7	79.3	76.3
72.5°	166.8	111.4	72.5	66.6	65.1
75°	137.6	85.2	59.8	54.6	53.9
77.5°	108.5	60.6	47.1	44.1	42.6
80°	81.5	43.4	35.9	32.9	32.9
82.5°	56.8	29.2	24.7	23.2	23.2
85°	32.1	16.4	14.2	14.2	14.2
87.5°	12.0	6.0	6.0	5.2	5.2
90°	1.4	17.2	46.7	43.9	45.3
92.5°	29.6	40.0	41.5	42.9	42.9
95°	69.6	83.0	85.3	85.3	83.0
97.5°	115.8	128.2	133.5	133.5	133.5
100°	169.2	180.2	184.0	184.0	182.6
102.5°	225.5	233.6	238.8	240.3	238.8
105°	287.0	290.8	293.7	296.0	296.0
107.5°	348.0	353.7	353.7	354.7	348.0
110°	407.1	414.8	414.8	414.8	410.9

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	471.0	479.1	477.7	473.9	471.0
115°	533.9	541.6	539.2	537.8	533.9
117.5°	596.4	606.9	600.2	596.4	592.6
120°	659.3	669.8	659.3	659.3	655.0
122.5°	716.5	729.9	723.2	719.4	716.5
125°	776.6	788.5	784.7	780.4	779.0
127.5°	835.2	850.0	844.8	839.0	835.2
130°	890.1	907.2	904.8	902.0	896.7
132.5°	951.6	964.9	965.9	959.2	955.4
135°	1004.5	1019.2	1022.1	1020.7	1016.9
137.5°	1063.6	1075.5	1077.9	1076.9	1071.2
140°	1115.5	1127.5	1134.1	1134.1	1128.9
142.5°	1168.9	1180.9	1184.7	1186.1	1180.9
145°	1219.5	1229.0	1236.6	1238.1	1232.8
147.5°	1264.8	1276.7	1282.4	1284.8	1279.5
150°	1311.5	1319.6	1324.8	1329.1	1324.8
152.5°	1353.0	1361.1	1367.7	1373.0	1367.7
155°	1394.4	1398.2	1402.5	1409.2	1404.9
157.5°	1430.2	1433.0	1435.4	1445.0	1438.3
160°	1462.1	1465.0	1466.4	1474.5	1468.8
162.5°	1491.7	1491.7	1493.1	1502.2	1495.5
165°	1517.0	1515.5	1515.5	1525.1	1518.4
167.5°	1539.8	1535.5	1535.5	1545.1	1538.4
170°	1557.0	1553.2	1551.8	1561.3	1553.2
172.5°	1568.9	1565.1	1563.7	1573.2	1565.1
175°	1578.5	1574.6	1571.8	1581.3	1573.2
177.5°	1583.7	1579.9	1577.0	1585.1	1577.0
180°	1581.3	1581.3	1581.3	1581.3	1581.3

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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	6.60	7.28	7.73	8.40	9.96	2.58	3.26	3.72	4.38	5.94
	3H	8.24	8.85	9.38	9.98	11.55	3.75	4.35	4.88	5.48	7.05
	4H	8.83	9.40	9.98	10.53	12.11	4.18	4.75	5.33	5.88	7.46
	6H	9.22	9.75	10.38	10.88	12.47	4.48	5.00	5.63	6.14	7.73
	8H	9.33	9.84	10.49	10.98	12.56	4.55	5.06	5.71	6.20	7.79
	12H	9.38	9.86	10.54	11.00	12.60	4.59	5.06	5.75	6.20	7.81
4H	2H	6.60	7.17	7.75	8.30	9.88	3.15	3.72	4.30	4.85	6.43
	3H	8.38	8.86	9.54	10.02	11.61	4.46	4.94	5.63	6.10	7.69
	4H	9.05	9.49	10.21	10.63	12.24	4.99	5.43	6.16	6.58	8.19
	6H	9.54	9.91	10.70	11.08	12.68	5.39	5.76	6.55	6.93	8.53
	8H	9.69	10.05	10.86	11.20	12.82	5.50	5.85	6.67	7.01	8.63
	12H	9.77	10.09	10.95	11.26	12.88	5.55	5.87	6.73	7.04	8.66
8H	4H	9.00	9.35	10.17	10.51	12.13	5.25	5.60	6.41	6.76	8.37
	6H	9.54	9.83	10.73	11.03	12.64	5.74	6.03	6.92	7.23	8.84
	8H	9.74	9.99	10.93	11.17	12.80	5.92	6.17	7.11	7.34	8.98
	12H	9.85	10.08	11.05	11.25	12.92	6.01	6.24	7.21	7.41	9.08
12H	4H	8.95	9.27	10.13	10.43	12.06	5.24	5.56	6.42	6.73	8.35
	6H	9.51	9.76	10.70	10.94	12.58	5.78	6.03	6.97	7.21	8.84
	8H	9.71	9.93	10.90	11.11	12.77	5.97	6.19	7.16	7.37	9.03

END OF REPORT