

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: P931231

Luminaire Tested: DFN2DS-TR2F0-020DS840-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931231
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333812)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-TR2F0-020DS840-FLL
Description: 2 foot, Triangle Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

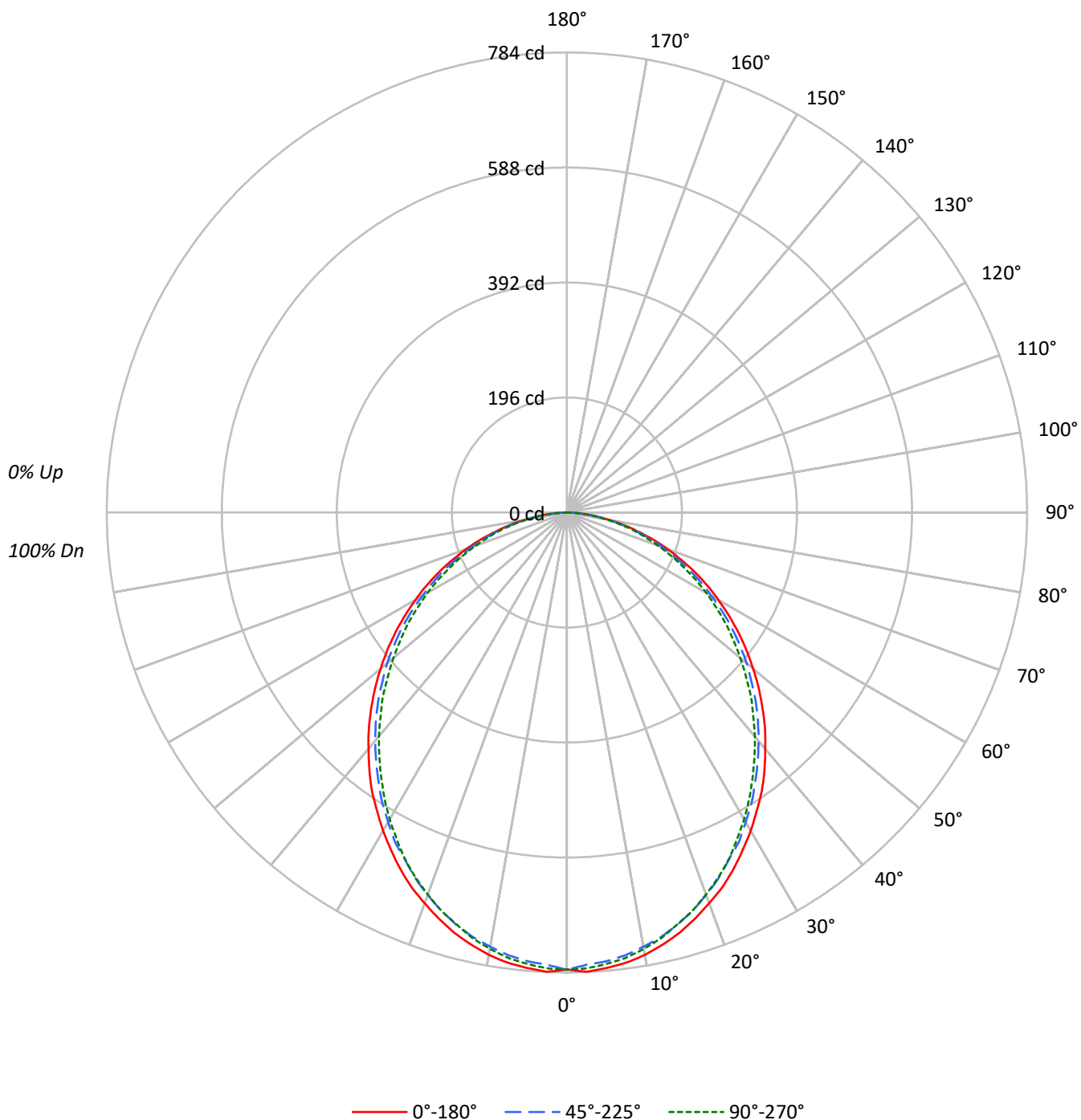
Lumens per Lamp: N/A
Luminaire Lumens: 1982.0 lumens
Efficiency: N/A
Efficacy: 112.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.36' x L: 2.04' x H: 0')
CIE Type: Direct

Input Watts (W): 17.6
Input Voltage (V): 120
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
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1738	1738	1738
5°	1744	1719	1729
10°	1734	1702	1710
15°	1712	1679	1678
20°	1682	1646	1645
25°	1652	1606	1606
30°	1613	1568	1555
35°	1577	1524	1501
40°	1531	1479	1450
45°	1486	1434	1399
50°	1437	1388	1339
55°	1387	1334	1284
60°	1330	1270	1223
65°	1269	1206	1151
70°	1192	1128	1075
75°	1084	1038	1013
80°	963	934	885
85°	783	747	670

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1486 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.3	3.7
10°-20°	206.3	10.4
20°-30°	303.2	15.3
30°-40°	352.1	17.8
40°-50°	351.7	17.7
50°-60°	306.6	15.5
60°-70°	226.7	11.4
70°-80°	128.3	6.5
80°-90°	33.9	1.7
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	582.8	29.4
0°-40°	934.9	47.2
0°-60°	1593.2	80.4
0°-90°	1982.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1982.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	779	779	779	779	779	
5°	779	776	768	774	772	74
15°	742	737	727	730	727	209
25°	671	665	652	654	652	309
35°	579	572	560	555	551	362
45°	471	466	455	446	443	364
55°	357	352	343	334	330	319
65°	240	236	228	222	218	238
75°	126	124	120	116	118	134
85°	31	30	29	27	26	36
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	779.0	779.0	779.0	779.0	779.0
2.5°	783.5	779.8	771.5	779.0	777.6
5°	779.0	776.1	767.8	773.8	772.3
7.5°	773.8	769.3	761.1	767.1	765.6
10°	765.6	760.4	751.4	757.3	755.1
12.5°	754.3	749.8	740.8	744.5	743.0
15°	741.5	737.1	727.3	730.3	726.6
17.5°	725.8	721.4	711.6	715.3	711.6
20°	708.6	704.1	693.6	695.9	692.9
22.5°	691.4	684.7	674.9	674.9	673.4
25°	671.2	665.2	652.5	653.9	652.5
27.5°	648.6	643.4	633.7	631.5	627.7
30°	626.2	620.2	609.0	606.8	603.7
32.5°	602.2	597.8	585.8	581.3	578.3
35°	579.1	571.6	559.6	555.1	551.3
37.5°	552.9	546.0	534.0	528.8	525.0
40°	525.8	519.8	507.8	501.2	498.1
42.5°	499.6	493.6	481.7	474.2	469.7
45°	471.2	466.0	454.7	446.4	443.4
47.5°	443.4	438.2	426.2	417.9	413.5
50°	414.2	410.5	400.0	389.5	385.8
52.5°	385.8	380.5	370.8	362.6	357.4
55°	356.6	352.1	343.0	334.1	330.3
57.5°	327.3	323.6	313.8	304.9	301.8
60°	298.1	295.2	284.7	276.4	274.2
62.5°	269.7	264.4	257.0	249.4	246.4
65°	240.4	235.9	228.5	221.7	218.0
67.5°	210.5	206.7	200.0	194.8	191.8
70°	182.8	179.8	173.0	167.8	164.9
72.5°	154.4	151.4	147.5	142.3	140.1
75°	125.8	124.4	120.5	116.1	117.6
77.5°	100.4	97.4	95.8	93.6	91.4
80°	75.0	74.2	72.7	70.4	68.9
82.5°	51.0	51.0	50.3	47.2	47.2
85°	30.6	29.9	29.2	26.9	26.2
87.5°	13.5	12.0	10.5	8.3	7.5
90°	0.0	0.0	0.0	0.0	0.0

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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	13.20	14.81	13.57	15.13	15.44	12.76	14.37	13.12	14.68	15.00
	3H	14.95	16.41	15.33	16.73	17.09	14.46	15.92	14.84	16.24	16.60
	4H	15.60	16.97	16.00	17.32	17.69	15.10	16.47	15.50	16.82	17.20
	6H	16.07	17.34	16.48	17.70	18.09	15.57	16.84	15.98	17.20	17.59
	8H	16.21	17.42	16.64	17.81	18.21	15.71	16.92	16.13	17.31	17.71
	12H	16.30	17.46	16.73	17.84	18.27	15.79	16.95	16.22	17.33	17.76
4H	2H	13.76	15.13	14.16	15.48	15.86	13.41	14.78	13.81	15.13	15.50
	3H	15.74	16.88	16.15	17.28	17.68	15.33	16.48	15.74	16.88	17.28
	4H	16.51	17.55	16.95	17.96	18.40	16.09	17.13	16.52	17.54	17.98
	6H	17.11	18.02	17.57	18.46	18.91	16.68	17.58	17.13	18.02	18.48
	8H	17.30	18.15	17.76	18.59	19.06	16.86	17.71	17.32	18.15	18.62
	12H	17.43	18.19	17.91	18.67	19.14	16.98	17.74	17.46	18.22	18.68
8H	4H	16.79	17.63	17.25	18.08	18.54	16.41	17.26	16.87	17.70	18.17
	6H	17.50	18.21	18.00	18.69	19.17	17.12	17.82	17.61	18.31	18.79
	8H	17.76	18.39	18.27	18.90	19.39	17.37	18.00	17.88	18.51	18.99
	12H	17.96	18.52	18.47	19.01	19.57	17.55	18.11	18.05	18.60	19.16
12H	4H	16.81	17.57	17.29	18.05	18.52	16.45	17.21	16.93	17.68	18.15
	6H	17.55	18.18	18.06	18.69	19.17	17.18	17.81	17.69	18.32	18.80
	8H	17.86	18.42	18.37	18.91	19.47	17.48	18.04	17.99	18.53	19.09

END OF REPORT